



Commission for
Communications Regulation

Market Review

Wholesale High Quality Access at a Fixed Location

Response to Consultation, Further Consultation and Draft Decision

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Responses to this Consultation

All responses to this consultation should be clearly marked:

“Reference: Submission to ComReg document No 18/08”, and sent by post, e-mail or fax to arrive on or before 5 pm, 4th April 2018, to:

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1 Introduction

- 1.1 This Response to Consultation and Further Consultation (**'Further Consultation'**) presents ComReg's preliminary views on its analysis of the wholesale market(s) for Wholesale High Quality Access (**WHQA**) services provided at a fixed location¹. It summarises and responds to submissions received in response to the 2016 Consultation². Following further analysis, ComReg has revised some of its preliminary views set out in the 2016 Consultation and now seeks further comments on these, largely relating to the Modern Interface (MI) WHQA Market. ComReg has also set out its preliminary position on a range of other issues.
- 1.2 WHQA services, also commonly known as "wholesale leased line" services, play an important role in facilitating the provision of Information and Communications Technology (**'ICT'**) services to medium and large sized businesses, including multi-national businesses, as well as public sector institutions (e.g. hospitals, government departments, educational facilities). In this respect, WHQA is a wholesale input into the provision of various retail data connectivity services for businesses, including for use in the provision of internet access, facilitating connectivity between a businesses' site locations for the purpose of transferring information and/or communications, and data back-up/remote storage solutions such as cloud storage/computing (generically referred to throughout this Further Consultation as 'retail business connectivity services' or **'RBCS'**).
- 1.3 Apart from supporting RBCS, WHQA services are also important network inputs for Service Providers (**'SP(s)'**) themselves. In this respect, SPs can use WHQA services as network inputs in building out their networks, including for backhauling data and/or voice traffic. Such inputs enable them to provide a range of fixed and/or mobile communications services to consumers and business customers. SPs may also use WHQA as inputs to the provision of other wholesale services.

¹ Corresponding to Market 4 listed in the European Commission Recommendation 2014/710/EU of 09 October 2014 on relevant product and services markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (the **'2014 Recommendation'**), (OJ L 295, 11.10.2014, p. 79).

² "Market Review - Wholesale High Quality Access at a Fixed Location, Consultation, [ComReg Document 16/69](#), 18 August 2016" (the **'2016 Consultation'**).

- 1.4 Consistent with ComReg's statutory role to review certain electronic communications markets, the objective of this market review has and continues to be undertaken to examine the extent of competition within the WHQA market(s). In circumstances where such markets are not found to be effectively competitive due to one or more SPs having SMP, the imposition of appropriate regulatory obligations on that SP may be necessary in order to address identified competition problems that could arise in the Relevant WHQA Market(s)³ or related markets. Similarly, if any such markets are found to be sufficiently competitive (or tending towards effective competition), then regulatory intervention would not be justified.
- 1.5 This introductory section of the Further Consultation describes the following:
- (a) an overview of the WHQA market(s) (discussed in paragraphs 1.7 to 1.17 below);
 - (b) background to the previous review of the leased line ('LL') markets and why the current review is being undertaken (discussed in paragraphs 1.18 to 1.27 below);
 - (c) the legal basis and the regulatory framework according to which the review leading to this Further Consultation has been undertaken (discussed in paragraphs 1.28 to 1.41 below);
 - (d) the current review in this Further Consultation and the relationship with the 2016 Consultation (discussed in paragraphs 1.42 to 1.53 below);
 - (e) an outline of the information sources relied upon for the analysis set out in the Further Consultation (discussed in paragraphs 1.54 to 1.57 below);
 - (f) the procedure for the consultation process including timeframes within which respondents should submit their views (discussed in paragraphs 1.58 to 1.67); and
 - (g) an overview of the structure of the remaining Sections of this Further Consultation (discussed in paragraph 1.68 below).
- 1.6 Section 2 contains an executive summary of the overall preliminary conclusions in this Further Consultation. A list of frequently used acronyms is also set out in Appendix: 10 of this Further Consultation.

³ See paragraph 2.41 below.

1.1 What is WHQA?

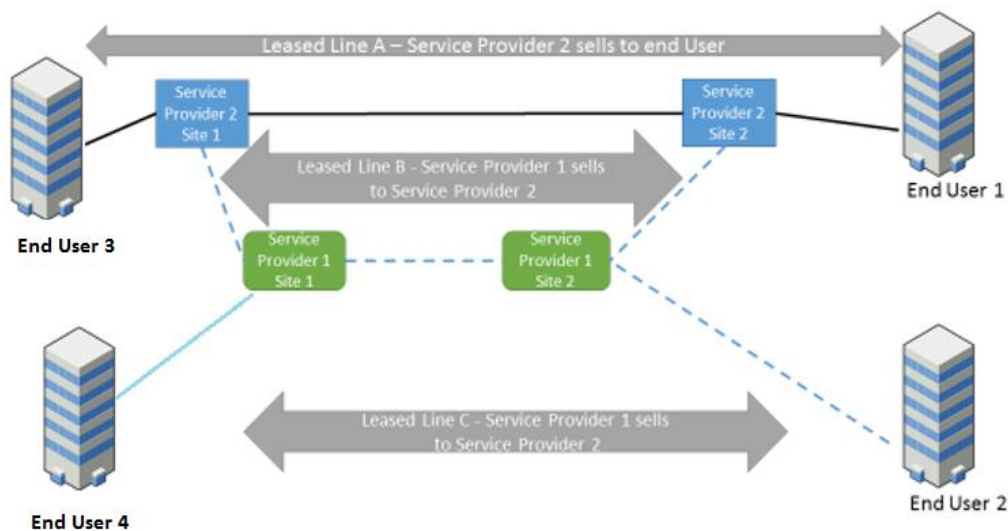
- 1.7 In general, WHQA is a wholesale service that involves the supply of dedicated transmission capacity between fixed locations and is commonly referred to as leased lines ('**LL(s)**') services.⁴ As noted in the Explanatory Note to the 2014 Recommendation⁵, the distinguishing product characteristics of LLs are their ability to provide dedicated, uncontended connections, and symmetrical upload and download speeds. Currently, there are a number of SPs supplying wholesale LL services in Ireland, including Eircom, BT and Enet.
- 1.8 The purchase of wholesale LL services enables SPs to ultimately offer retail LL services that can be used to support a variety of applications such as voice (fixed and/or mobile), video and data communications. Typically, retail LL services are demanded by organisations in both private and public sectors, in order to support a wide variety of ICT applications, such as (but not limited to) access to the internet, private voice and data networks, cloud based services, backup and disaster recovery, remote monitoring and telemetry applications. Retail LL services are also used to build Virtual Private Networks ('**VPNs**') that allow organisations to link business sites together, including data centres, so that offices can exchange data and access corporate applications. This also allows retail organisations to offer a multiplicity of services to business and retail consumers via the internet or data networks.
- 1.9 Wholesale LL services allow SPs to provide retail LL (and associated) services to customers that could not otherwise be capable of being served through the use of the SP's own network. For example, a SP may wish to provide retail LL services to a customer's premises, but may not have a direct access connection to that customer's premises over which LL services can be provided. Such a SP can then, at the wholesale level, purchase wholesale LL services from another SP which it, in turn, uses in providing its downstream retail LL services.
- 1.10 These services also allow a SP to establish a new Point of Presence ('**POP**') in an area using third party LLs to connect this POP to its closest pre-existing nodes or network. It may subsequently build out its own network to directly connect this POP when it has established sufficient concentrations of customers in this area to commercially justify this network expansion.

⁴ The Further Consultation refers to either Wholesale High Quality Access (WHQA) or Leased Lines (LLs) interchangeably throughout this document.

⁵ Section 4.2.2.3; EU Explanatory Note accompanying the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation, dated 9.10.2014 (the '[Explanatory Note to the 2014 Recommendation](#)').

- 1.11 SPs are also purchasing wholesale LL services in order to build their own networks as well as to supply fixed or mobile backhaul services. For example, wholesale LL connections are used by Mobile Network Operators ('**MNO(s)**') to convey traffic from a dispersed set of radio access nodes/base stations to a centralised location where calls and data can be routed over core networks to their eventual destination.
- 1.12 The relationship between wholesale LL services (and regulation) and the manner in which they are used in supplying retail LL services is illustrated in the stylised examples set out in Figure 1 to Figure 3 below.⁶

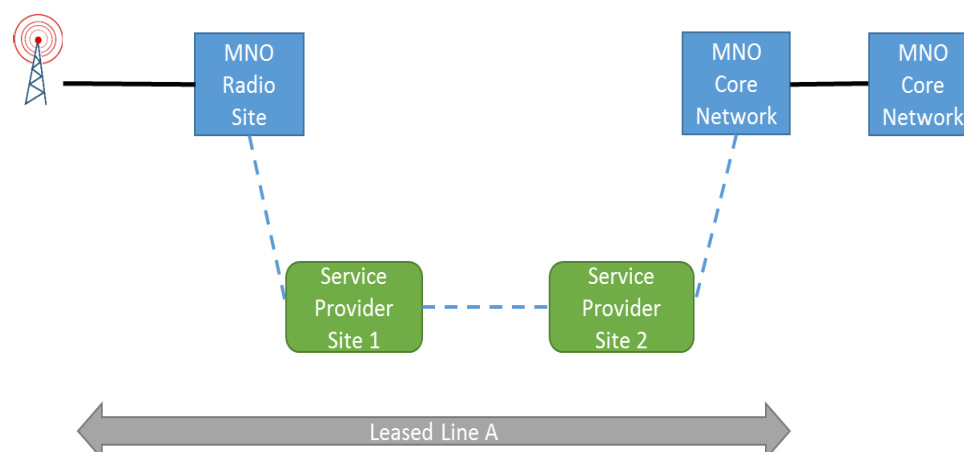
Figure 1: Typical use of WHQA Services using Retail Leased Lines



- 1.13 In Figure 1 Leased Line A illustrates various (but not exhaustive) uses of upstream WHQA inputs to provide a retail LL services. For LL A, SP 2 provides a retail LL connecting end-users 1 and 3. It achieves this using its own local access network from each of its nodes at either end (denoted by Site 1 and Site 2 above in the case of SP2). Crucially, it uses a wholesale LL (Leased Line B) purchased from SP 1 to connect between both of its nodes. Another scenario is that of pure resale, LL C. This is where SP 1 installs a line entirely on its own network connecting end-users 2 and 4, on behalf of SP 2. SP 2 purchases this LL in its entirety from SP 1 i.e. it does not connect to its own network.

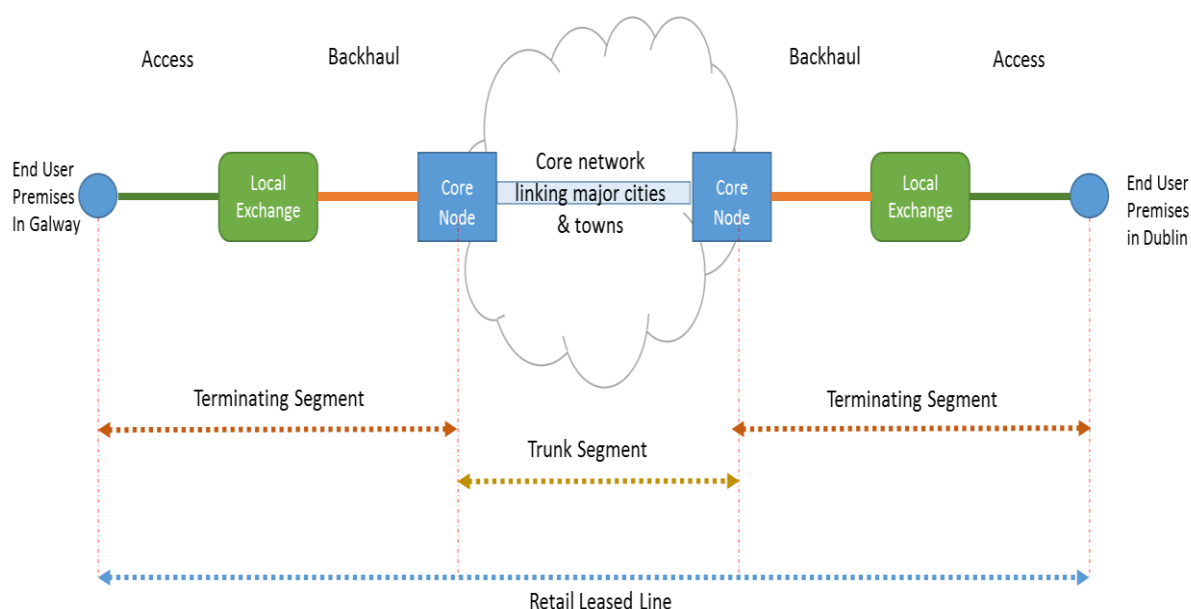
⁶ These examples are for illustration purposes only and do not detail all LL configurations.

Figure 2: Typical use of WHQA services by MNOs



- 1.14 In Figure 2 the mobile network operator (**MNO**) purchases wholesale LLs from SP 1 in order to convey traffic from its radio site to its core network.
- 1.15 In this Further Consultation, ComReg makes a distinction between different components of the LL connections. The distinction is between the trunk and terminating segments of LL as shown in the stylised Figure 3 below:

Figure 3: Wholesale LL network segments



- 1.16 There are two broad types of wholesale LL services:

- (a) **End-to-end services:** these link two end-user sites, where either end could be a business consumer end-user or SP network site. These are comprised of local access connections either directly connected at the same local serving node or exchanges or two geographically separated local ends connected across the core network of a SP. These can also consist solely of core capacity in the instance where both ends are network nodes connected with high bandwidth services. Thus, an end-to-end LL can range in scale from an analogue line connecting two business premises to a multiple 100 Gb/s service connecting data centres or network nodes.
- (b) **Interconnection based or Partial Private Circuit⁷ ('PPC') type Terminating segments of Wholesale LL:** A detailed explanation of PPCs was set out in Section 5 of the 2016 Consultation⁸. These segments most commonly link an end-user's premises to the network node of the SP purchasing the terminating segment, enabling the purchasing SP to assemble an end-to-end LL service using a combination of wholesale LL inputs and its own network. Terminating segments can also be used to link together network nodes in the purchasing SP's network. Terminating segments consist of access and any (necessary) backhaul segments (and associated facilities) as discussed below:
 - (i) Access segments: these are typically the final network circuit connecting an end-user's premises to a local access node - for example - on Eircom's network this might be in a local exchange ('LE' or 'Exchange') or an equivalent point on other authorised operator's ('OAO'(s)) network.
 - (ii) Backhaul segments: these are connections running from a local access node back to the purchasing SP's own core network (or between Exchanges⁹). Backhaul segments often make greater use of shared infrastructure, including physical sharing.

⁷ PPC Partial Private Circuit is an interconnection based service where the Access Seeker provides a portion of the LL infrastructure. Typically, the wholesale operator provides a connection to a single customer premises (commonly referred to as a "half-circuit") while the other "end" of the circuit for connecting to the customer's other premises or service, will be provided on the Access Seeker's network or achieved through some other means.

⁸ See paragraphs 5.27 to 5.28 of the 2016 Consultation.

⁹ Throughout this Further Consultation ComReg refers to Exchanges, but this also includes other equivalent handover points.

- 1.17 SPs purchasing wholesale LL services typically pay a once-off connection/installation fee which typically depends on the location and length of the connection from the end-user location to serving network node of the purchasing SP. It may also depend on the amount of any civil engineering work required to achieve connectivity. Furthermore, SPs pay recurring wholesale charges which depend on a number of factors including the connection bandwidth, the class of service or priority queuing of the data carried on the LL and, in some instances, the location of the purchased connection.

1.2 Previous market review and subsequent developments

1.2.1 Previous market review

- 1.18 The previous review of the WHQA market (then known as market for wholesale terminating segments of leased lines) was completed in 2008¹⁰ (the '**2008 Decision**'). The 2008 Decision defined the market for wholesale terminating segments of leased lines ('**2008 Leased Lines Wholesale Market**') as follows:
- (a) All products offering fixed permanent point-to-point symmetric termination belong in the same market irrespective of the technology used to deliver the product and/or product bandwidth.
 - (b) The geographic scope of the market for wholesale terminating segments of leased lines was considered to be national.

¹⁰ See "[Market Analysis – Leased Lines Market Review, ComReg Document 08/103, Decision D06/08](#)", dated 22 December 2008 ('**2008 Decision**').

- 1.19 Having assessed competition in the 2008 Leased Lines Wholesale Market, ComReg designated Eircom as having SMP and imposed a range of remedies/obligations upon Eircom which, amongst other things, required it to offer Wholesale Leased Lines ('WLLs')¹¹ and Partial Private Circuits ('PPCs')¹², including handover¹³ to **Access Seekers**¹⁴ at regulated prices, in order to address the identified competition problems.
- 1.20 The 2008 Decision also examined the retail market for leased lines (in particular the minimum set of retail leased lines),¹⁵ as well as the market for trunk segments of wholesale leased lines. It found both of these markets to be effectively competitive (in the presence of regulation of wholesale terminating segments of LLs).
- 1.21 The 2008 Decision specified that the competitive wholesale trunk segment¹⁶ of wholesale leased lines consisted of circuits between certain urban centres¹⁷ of capacity equal to or greater than STM-1 (155Mb/s). It also defined the regulated (uncompetitive) wholesale terminating segment of leased lines to be all of the remaining wholesale market i.e. that which was not specifically described as being part of the trunk segment was deemed to be part of the terminating segment market.

¹¹ Eircom's WLLs connect directly to the end-user A-end and B-end locations and does not require any OAO infrastructure.

¹² Partial Private Circuit is an interconnection based service where the Access Seeker provides a portion of the LL infrastructure. Typically, the incumbent operator provides a connection to a single customer premises (commonly referred to as a "half-circuit") while the other "end" of the circuit for connecting to the customer's other premises or service, will be provided on the Access Seekers network or achieved through some other means.

¹³ Handover refers to the point of interconnection between the two networks, simply the point at which the circuits are "handed over" from one SP to another.

¹⁴ Access Seekers as referred to throughout this Further Consultation are those Undertakings or OAOs that purchase, or could potentially purchase, WHQA LL services.

¹⁵ Analogue lines and leased lines up to a bandwidth of 2Mb/s.

¹⁶ See Figure 3 above for the description of trunk and terminating segments of WHQA connections.

¹⁷ See Annex A of the 2008 Decision.

1.2.2 Subsequent Developments

- 1.22 In 2010, following a public consultation, ComReg decided¹⁸ to add an additional urban centre (Portlaoise) to the list of urban centres constituting the boundary of the wholesale trunk market as set out in the 2008 Decision. This followed a request from Eircom to expand the list to include seven additional centres¹⁹. Thus, in 2010 regulation was withdrawn from Eircom with respect to wholesale leased lines of STM-1 and greater capacity that connect Portlaoise to any of the other urban centres identified in the 2008 Decision.
- 1.23 In 2013, following a public consultation, ComReg²⁰ further expanded the list of urban centres and included Athlone, Charleville, Mallow and Roscommon (following Eircom's request to expand the trunk segment of the 2008 Leased Lines Wholesale Market and include an additional six urban centres)²¹. Thus, in 2013 the scope of 2008 Leased Lines Wholesale Market was further extended (with these additional urban centres not being subject to ex ante regulation).
- 1.24 Subsequent to the 2008 Decision, ComReg has also made a number of other decisions related to the remedies/obligations imposed in the 2008 Leased Lines Wholesale Market including:
- (c) the 2009 Ethernet Determination²² which explicitly noted that a request for uncontended wholesale Ethernet access falls within the market for wholesale terminating segments of LLs and is subject to the obligations imposed on Eircom by a 2005 Decision²³. These obligations include (but are not limited to) obligations of access, non-discrimination, and cost orientation.

¹⁸ See "[Leased Line Markets: Review of Urban Centres, ComReg Document 10/12, Decision D02/10](#)", dated 15 February 2010; (**The 2010 Urban Centres Decision**)

¹⁹ Athlone, Bray, Carlow, Clonmel, Naas, Portlaoise and Swords.

²⁰ See "[Leased Line Markets: Further review of Urban Centres, ComReg Document 13/75, Decision D12/13](#)", dated 29 July 2013. (**The 2013 Urban Centres Decision**).

²¹ Athlone, Charleville, Mallow, Roscommon and Tullamore.

²² See "[Determination in the dispute between BT Ireland and Eircom Limited in relation to alleged failure by Eircom to provide Leased Line termination segments based on uncontended Ethernet access, ComReg Document 09/58](#)", dated 14 July 2009 (**2009 Ethernet Determination**).

²³ See "[Market Analysis: Retail Leased Lines and Wholesale Terminating and Trunk Segments of Leased Lines \(National\), ComReg Document 05/29, Decision D7/05](#)", dated 30 March 2005 (**2005 Decision**).

- (d) the 2011 Access and Transparency Decision²⁴ which amended transparency and access obligations²⁵; and
- (e) the 2012 Price Control Decision²⁶ which further specified the price control obligations and in particular, methodologies used to derive regulated prices for Eircom's WLL, PPC and wholesale Ethernet services²⁷.

1.3 2016 Consultation

- 1.25 In August 2016 ComReg issued the 2016 Consultation²⁸ that set out its then preliminary views based on an analysis of the WHQA Market(s).
- 1.26 In the 2016 Consultation, ComReg set out proposals on the definition of WHQA Market(s) and its associated SMP assessment, as well as proposed obligations or remedies (as appropriate) that were to be imposed on any operators identified as having SMP, with a view to addressing potential competition problems to the ultimate benefit of end-users.

²⁴ See "[Amendments to the transparency obligation and the access obligation in the market for wholesale terminating segments of leased lines, ComReg Document 11/22, Decision D02/11](#)", dated 22 March 2011. (**'2011 Access and Transparency Decision'**)

²⁵ The 2011 Access and Transparency Decision set out that Eircom is no longer required to publish pricing information for WLL circuits of greater than 10Mb/s as it was accepted that the existing custom and practise of providing such pricing on application was sufficient for efficient operation of the market. The decision also obliged Eircom to amend frequency of billing offered by it to Access Seekers from a quarterly to a monthly basis, one month in advance of the provision of services in the 2008 Leased Lines Wholesale Market.

²⁶ See "[A final decision further specifying the price control obligation in the market for wholesale terminating segments of leased lines, ComReg Document 12/03, Decision D02/12](#)", dated 2 February 2012 (**'2012 Pricing Decision'**).

²⁷ Amongst other things ComReg specified that it will apply cost orientation to determine maximum PPC charges using bottom-up long-run average incremental costs plus (**'BU-LRAIC plus'**) model while for WLLs the maximum charges will be based on the published prices (at the time) as well as a minimum price floor which is set on the basis of the appropriate margins squeeze test (**'MST'**) between WLLs and PPCs on a similarly efficient operator (**'SEO'**) basis.

²⁸ "Market Review - Wholesale High Quality Access at a Fixed Location, Consultation, [ComReg Document 16/69](#), 18 August 2016" (the **'2016 Consultation'**).

- 1.27 12 responses (**‘Submission(s)’**) to the 2016 Consultation were received from a range of industry stakeholders (together referred to as the **‘Respondent(s)’**)²⁹. Having regard to ComReg’s consideration of these Submissions, as noted in Section 1.5 below, ComReg is issuing this Further Consultation which revises some of ComReg’s preliminary views as originally set out in the 2016 Consultation, as well as setting out preliminary positions on other matters.

1.4 Legal basis and regulatory framework

- 1.28 This market review is being undertaken by ComReg in accordance with the obligation under the **Framework Directive**³⁰ (transposed into Irish law as the **Framework Regulations**³¹) that National Regulatory Authorities (**‘NRAs’**) should analyse and define relevant market(s) taking the utmost account of the 2014 Recommendation³² (including the Explanatory Note to the 2014 Recommendation)³³ and the SMP Guidelines³⁴.
- 1.29 Regulation 26 of the Framework Regulations requires that ComReg, taking the utmost account of the 2014 Recommendation and of the SMP Guidelines, defines relevant markets appropriate to national circumstances, in accordance with the principles of competition law.
- 1.30 The European Commission (**‘EC’**) refers in the 2014 Recommendation to the WHQA market as follows:

“Wholesale high-quality access provided at a fixed location”³⁵,

²⁹ Respondents’ non-confidential Submissions have been published. See “Market Review: Wholesale High Quality Access at a Fixed Location, Submissions to Consultation 16/69, [ComReg Document 16/104s](#), 30 November 2016” (**‘Respondents’ Submissions’**).

³⁰ Articles 15 and 16 of Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services, as amended by Directive 2009/140/EC (the **‘Framework Directive’**).

³¹ European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011) (the **‘Framework Regulations’**). The Framework Regulations transpose the Framework Directive.

³² See footnote 1 above.

³³ See footnote 5 above.

³⁴ European Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic networks and services, OJ 2002 C 165/3 (the **‘SMP Guidelines’**).

³⁵ Market 4 in the annex to the 2014 Recommendation.

and the Explanatory Note to the 2014 Recommendation provides further information about the nature of WHQA market and in this respect notes that:

“... a wholesale market for high-quality access includes a wider range of access products necessary to fulfil the needs of business services providers (and ultimately large retail business customers) and which displays the service characteristics..... such as: (i) guaranteed availability and high quality of service in all circumstances including SLAs, 24/7 customer support, short repair times and redundancy, typically found in a services environment geared to the needs of business customers; (ii) high-quality network management, including of backhaul, resulting in upload speeds appropriate for business use and very low contention; (iii) the possibility to access the network at points which have been defined according to the geographic density and distribution of business rather than mass-market users; (iv) the possibility to offer separate Ethernet continuity (e.g. through an additional header allowing for several layers of virtual LANs).”³⁶.

- 1.31 It should also be noted that prior to the adoption of the 2014 Recommendation WHQA market was broadly identified in the 2007 Recommendation³⁷ as the market for wholesale terminating segments of leased lines (**‘2007 Wholesale Leased Lines Recommended Market’**)³⁸. As noted in paragraph 1.18, the 2007 Wholesale Leased Lines Recommended Market has been identified by ComReg as being susceptible to ex ante regulation and was thus regulated by ComReg pursuant to the 2008 Decision. Given the 2007 Recommendation has been replaced by the 2014 Recommendation, it is the latter which is now applicable for this current market review.

³⁶ See page 50 of Explanatory Note to the 2014 Recommendation.

³⁷ European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services OJ L 344 (the [‘2007 Recommendation’](#)).

³⁸ The WHQA market broadly corresponds to the 2007 Wholesale Leased Lines Recommended Market. However, the scope of WHQA market was broadened to include contended and asymmetric wholesale access products offered by a network owner to a wholesale access seeker over copper or hybrid infrastructures if these products display certain advanced quality characteristics at the wholesale level as described in paragraph 1.2 above.

- 1.32 Having regard to Regulation 25 of the Framework Regulations, where ComReg determines, as a result of a market analysis carried out by it in accordance with Regulation 27 of the Framework Regulations, that a given market identified in accordance with Regulation 26 of the Framework Regulations is not effectively competitive, ComReg is obliged under Regulation 27(4) of the Framework Regulations to designate an Undertaking(s) with SMP in that market and impose on such Undertaking(s) such specific obligations as it considers appropriate, or maintain or amend such obligations where they already exist.
- 1.33 In line with the with the “Modified Greenfield Approach” (**‘MGA’**) set out in the Explanatory Note to the 2014 Recommendation³⁹, ComReg’s assessment starts from the assumption that SMP regulation is not present in the market(s) under consideration, i.e. no ex ante regulation in the specific WHQA market under consideration. However, regulation present in other related markets⁴⁰ or through the general regulatory framework is considered. This approach is used in order to avoid drawing conclusions regarding the competitive structure of a particular market which may be influenced by, or indeed premised on, existing regulation on that market. Considering how a market may function absent regulation, helps to ensure that SMP based regulation is only applied (or withdrawn) in those circumstances where it is truly justified and proportionate.
- 1.34 Where an operator is ultimately designated as having SMP in a market, ComReg is obliged, under Regulation 8(1) of the **Access Regulations**⁴¹, to impose on such an operator (or maintain where they already exist) such of the obligations set out in Regulations 9 to 13 of the Access Regulations as it considers appropriate. Obligations imposed must:
- (a) be based on the nature of the problem identified;

³⁹ See page 8 of Explanatory Note to the 2014 Recommendation.

⁴⁰ For example, regulation for the market Wholesale central access for mass-market products provided at a fixed location (**‘WLA’**).

⁴¹ European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) (the **‘Access Regulations’**). The SMP Guidelines also state at paragraph 17 that “NRAs must impose at least one regulatory obligation on an Undertaking that has been designated as having SMP”.

- (b) be proportionate and justified in the light of the objectives laid down in section 12 of the Communications Regulation Act 2002 (as amended)⁴², and Regulation 16 of the Framework Regulations; and
 - (c) only be imposed following consultation in accordance with Regulations 12 and 13 of the Framework Regulations.
- 1.35 Section 12(1)(a) of the Act sets out ComReg's objectives⁴³ in exercising its functions in relation to the provision of electronic communications networks, electronic communications services and associated facilities, namely:
- (a) to promote competition;
 - (b) to contribute to the development of the internal market; and
 - (c) to promote the interests of users within the European Union.
- 1.36 ComReg has conducted a public consultation⁴⁴ in accordance with Regulation 12 of the Framework Regulations and through this Further Consultation is continuing to consult with stakeholders.
- 1.37 Apart from conducting a public consultation in accordance with Regulation 12 of the Framework Regulations, ComReg is also obliged to make its draft measures accessible to the EC, **BEREC**⁴⁵ and the NRAs in other Member States pursuant to Regulation 13(3) of the Framework Regulations. ComReg will consult with the Competition and Consumer Protection Commission (CCPC) on its preliminary views on the Relevant WHQA Markets in due course.
- 1.38 Overall, in preparing this Further Consultation, ComReg has taken account of its functions and objectives under the Communications Regulation Acts 2002 (as amended), in addition to requirements under the Framework Regulations and the Access Regulations.

⁴² Communications Regulation Act 2002 (No. 20 of 2002), as amended.

⁴³ Article 8 of the Framework Directive sets out similar objectives for NRAs and notes that in pursuing these policy objectives NRAs shall apply objective, transparent, non-discriminatory and proportionate regulatory principles.

⁴⁴ See "Market Review - Wholesale High Quality Access at a Fixed Location, Consultation, [ComReg Document 16/69](#), 18 August 2016" (the '**Consultation**').

⁴⁵ Body of European Regulators for Electronic Communications ('**BEREC**') as established by Regulation (EC) No 1211/2009 of the European Parliament and of the Council of 25 November 2009 the Body of European Regulators for Electronic Communications (BEREC) and the Office.

- 1.39 The analysis undertaken in this Further Consultation also takes the utmost account of the following documents (along with other documents as noted elsewhere throughout this Further Consultation):
- (a) the 2014 Recommendation and the Explanatory Note to the 2014 Recommendation on relevant product and service markets susceptible to ex ante regulation within the electronic communications sector;
 - (b) the SMP Guidelines on market analysis and the assessment of significant market power; and
 - (c) the 2005 Accounting Separation and Cost Accounting Recommendation⁴⁶.
- 1.40 ComReg also takes account of:
- (a) the Notice on Market Definition⁴⁷ for the purposes of community competition law;
 - (b) any relevant common positions adopted by BEREC⁴⁸; and
 - (c) any relevant EC comments made, pursuant to Article 7 and 7a of the Framework Directive, with respect to NRAs' market analyses.
- 1.41 ComReg is assessing the WHQA market(s) in the context of the market analysis framework and documents explained above, including having regard to ComReg's consideration of Respondents' Submissions to the 2016 Consultation.

1.5 Current Review and the 2016 Consultation

- 1.42 In August 2016, in accordance with Regulation 12 of the Framework Regulations, ComReg issued the 2016 Consultation that set out its then preliminary views based on an analysis of the WHQA Market(s).

⁴⁶ European Commission Recommendation of 19 September 2005 on accounting separation and cost accounting systems under the regulatory framework for electronic communications (2005/698/EC) (the '[2005 Accounting Separation and Cost Accounting Recommendation](#)').

⁴⁷ Commission notice on the definition of relevant market for the purposes of Community competition law, (the '[Notice on Market Definition](#)'), Official Journal C 372, 09/12/1997 P. 0005 – 0013.

⁴⁸ See BEREC Common Position on geographic aspects of market analysis (definition and remedies) of 5 June 2014, BEREC Document number BoR (14)73, (the '[2014 BEREC Common Position on geographic aspects of market analysis](#)') and Revised BEREC Common Position on best practices in remedies as a consequence of a SMP position in the relevant markets for wholesale leased lines of 26 November 2012, BEREC Document number BoR (12) 126, (the '[2012 BEREC Common position on remedies in wholesale leased lines markets](#)').

- 1.43 In the 2016 Consultation, ComReg set out its preliminary view that there were a number of separate WHQA markets, each of which were national in their geographic scope. These were⁴⁹:
- (a) a national **Low Bandwidth ('LB') Traditional Interface ('TI') WHQA Market** consisting of analogue, digital and TDM wholesale LLs with bandwidths $\leq 2\text{Mb/s}$;
 - (b) a national **High Bandwidth ('HB') TI WHQA Market** consisting of TDM wholesale LLs with bandwidths $> 2\text{Mb/s}$, and
 - (c) a national **Modern Interface ('MI') WHQA Market** consisting of all Ethernet, xWDM (and other modern high bandwidth interfaces) LLs of any bandwidth.
- 1.44 Furthermore, ComReg was of the preliminary view that Eircom was likely to have SMP in the LB TI WHQA Market and no SP was likely to have SMP in the HB TI WHQA Market or MI WHQA Market.
- 1.45 12 Submissions to the 2016 Consultation were received from a range of stakeholders (together referred to as the **Respondent(s)**), namely:
- (a) Airspeed Communications Limited (**'Airspeed'**);
 - (b) Alternative Operators in the Communications Market (**'ALTO'**);
 - (c) BT Communications Ireland Limited (**'BT'**);
 - (d) Cogent Communications Holdings Incorporated (**'Cogent'**);
 - (e) Eircom Limited (**'Eircom'**);
 - (f) e-Nasc Éireann Teoranta (**'Enet'**);
 - (g) GTT Communications Incorporated (**'GTT'**);
 - (h) HEAnet Limited (**'HEAnet'**);
 - (i) Three Ireland (Hutchison) Limited (**'Three'**);
 - (j) Verizon Ireland Limited (**'Verizon'**);
 - (k) Virgin Media Ireland Limited (**'Virgin Media'**); and
 - (l) Vodafone Ireland Limited (**'Vodafone'**).

⁴⁹ The analysis underpinning ComReg's preliminary views on the definition of the WHQA markets is set out in section 5 of the Consultation.

- 1.46 The non-confidential versions of Respondents' Submissions were subsequently published on ComReg's website in November 2016⁵⁰.
- 1.47 In April 2017 ComReg issued the 2017 Information Notice⁵¹ in which ComReg notified its intention to issue a Further Consultation on its analysis of the WHQA Market. In this 2017 Information Notice ComReg noted that Respondents' Submissions, subsequent meetings with industry stakeholders and retail end-users, alongside further data gathered by ComReg, have raised a number of issues that ComReg considers require further detailed consideration⁵².
- 1.48 These considerations largely relate to matters relevant to the definition of the MI WHQA Market (both product and geographic market definition dimensions) and, as a consequence, to the assessment of competition in this market. They include (but are not limited to) the following:
- (a) Whether MI WHQA provided over point-to-point ('P2P') radio links is an effective substitute for wired MI WHQA connectivity.
 - (b) Issues surrounding the use of MI WHQA services as networks inputs (e.g. as backhaul services) by SPs which, in turn, can be used to support the supply of a range of wholesale and retail services.
 - (c) Use of MI WHQA services for the supply of data connectivity to multi-site retail LL customers who have multiple premises in geographically dispersed locations.
- 1.49 This Further Consultation sets out ComReg's preliminary view on these and other aspects of the analysis of the WHQA markets, but also ComReg's preliminary positions on other issues. Throughout this Further Consultation, ComReg has summarised Respondents' main views on the issues set out in the 2016 Consultation and has carefully considered them before setting out its further preliminary views and proposed positions.

⁵⁰ Market Review: Wholesale High Quality Access at a Fixed Location – Non-Confidential Responses Received to ComReg Document 16/69, ComReg Document No. 16/104s, dated 30 November 2016 (['Respondents' Submissions'](#)).

⁵¹ "Information Notice - Wholesale High Quality Access Market Review, Further consultation on certain aspects of the MI WHQA Market, [ComReg Document 17/28](#), 07 April 2017" (the '**2017 Information Notice**').

⁵² See paragraph 5 of the 2017 Information Notice.

- 1.50 As part of this market review, ComReg has obtained qualitative and quantitative information from providers of retail and wholesale LL services through a series of formal⁵³ and informal information requests in relation to the retail LL and wholesale LL markets. This information is also supplemented with information which is provided to ComReg in the performance of its regular operations (e.g. for the Irish Communications Market Quarterly Key Data Reports ('**QKDR(s)**')⁵⁴. ComReg has also reviewed, in detail, the experience of regulating relevant wholesale LL markets in other European jurisdictions and has carefully analysed guidance available from the EC, BEREC and other relevant commentators before arriving at its preliminary views in this Further Consultation.
- 1.51 As identified in the 2016 Consultation, ComReg also carried out market research to inform its understanding of business attitudes/behaviours in the retail broadband market and the retail LL market. Two separate business surveys were undertaken, a survey of small and medium enterprises along with corporate businesses. The results of this survey (referred to as the '**2014 Market Research**') have already been published by ComReg as part of the 2016 Consultation⁵⁵.
- 1.52 Separately, in order to further inform its understanding of business and public sector organisations' attitudes/behaviours in the retail LL market and assess views expressed in Respondents' submissions, ComReg has conducted a number of face to face interviews with public and private sector organisations purchasing LL services. These interviews were motivated, in part, by the Respondents' submissions that stated that there was a reliance on regulated access to MI WHQA for the fulfilment of retail contracts for customers with multiple sites in different geographic locations (referred to as '**Multi-site retail LL customers**'). A non-confidential summary overview of responses obtained from ComReg's interviews is published alongside this Further Consultation (referred to as '**Interviews with End-users of LLs**') and is set out in Appendix: 4.

⁵³ Information provided by operators in response to detailed statutory information requests ('**Statutory Information Requests**') issued by ComReg.

⁵⁴ See <https://www.comreg.ie/industry/electronic-communications/market-information/quarterly-key-data-report/>.

⁵⁵ See "ComReg: Market Analysis - Business Market, [ComReg Document 16/69b](#), 18 August 2016" (the '**2014 Market Research**').

1.53 ComReg is mindful that interviews and surveys, while a useful practical means of gathering information on consumer and business preferences/behaviours, need to be interpreted with care and that stated preferences of interview/survey respondents can differ from how they behave in practice. Therefore, ComReg does not solely or overly rely on the Interviews with End-users of LLs and 2014 Market Research in forming its preliminary conclusions as set out in this Further Consultation. ComReg considers all the information available to it at the time of publishing this Further Consultation.

1.6 Information Sources Relied Upon

1.54 In conducting its analysis, as noted above, ComReg has drawn on information from a number of sources, including:

- (a) Interviews with End-users of LLs. This included attitudinal interviews with public and private sector organisations purchasing LL services. The summary overview of interviewees' responses is published in Appendix: 4 of this Further Consultation;
- (b) Information provided by SPs in response to detailed statutory information requests issued by ComReg in which both quantitative and factual information on the retail leased lines market and the WHQA market was sought. This included statutory information requests issued on 11 February 2014⁵⁶, 05 December 2014⁵⁷, 15 January 2016⁵⁸, 23 September 2016⁵⁹ and on 12 April 2017⁶⁰, (together referred to as the 'Statutory Information Requests' or 'SIRs'⁶¹);
- (c) Information provided to ComReg in subsequent follow-up correspondence and discussions in relation to (b) above;

⁵⁶ The 'February 2014 Statutory Information Requests'.

⁵⁷ The 'December 2014 Statutory Information Requests'.

⁵⁸ The 'January 2016 Statutory Information Requests'.

⁵⁹ The 'September 2016 Statutory Information Requests'.

⁶⁰ The 'April 2017 Statutory Information Requests'.

⁶¹ Where ComReg refers to a specific SIR (and the response to it) in this Further Consultation it typically specifies its date. For example, the 'April 2017 SIR'.

- (d) The 2014 Market Research. This included attitudinal surveys of business users of retail broadband, retail HQA and other services. ComReg notes that the results of this survey have already been published by ComReg as part of the 2016 Consultation⁶²;
 - (e) Information provided to ComReg by SPs for the purpose of the QKDR;
 - (f) Information provided by SPs to ComReg through a non-statutory based qualitative questionnaire⁶³ ('Qualitative Questionnaire'); and
 - (g) Other information in the public domain and information sources identified in the 2016 Consultation.
- 1.55 Consultants TERA⁶⁴ (supported by Geocible⁶⁵) were also engaged to assist ComReg in examining the heterogeneity (or otherwise) of competitive conditions for the provision of MI WHQA services in Ireland and as part of this remit, TERA were required to inspect information obtained via the SIRs⁶⁶, map connectivity and calculate market shares in the MI WHQA Markets in terms of LL customer premises (both retail and wholesale customer premises) connected with MI LLs. TERA's analysis is published in Appendix: 1 of this Further Consultation ('**TERA Report**')⁶⁷.
- 1.56 ComReg refers to the outputs of these data sources throughout the remainder of this Further Consultation.
- 1.57 However, it should also be noted that ComReg intends to re-fresh some of the data sources identified above in parallel with this consultation process, and will take such updated data, including Respondents' views, into account when issuing its final decision.

⁶² Appendix 2 of the 2016 Consultation.

⁶³ Qualitative Questionnaires were issued by ComReg in May 2015. SPs submitted their responses to Qualitative Questionnaires in June 2015.

⁶⁴ See <http://www.teraconsultants.fr/en/>.

⁶⁵ See <https://www.geocible.com/>.

⁶⁶ In particular, TERA examined the information on the location of alternative wired networks with respect to SAs and performed a mapping exercise by estimating the proximity of these networks to LL customer premises and, separately, to premises of Multi-site customers of retail LLs. Details on the TERA analysis are referred throughout relevant Sections of the Further Consultation.

⁶⁷ See Appendix: 1.

1.7 Consultation Process

- 1.58 As noted above, the purpose of this Further Consultation is to set out ComReg's preliminary views and positions on its analysis of the relevant WHQA market(s) (i.e. product and geographic definition, competition analysis and assessment of SMP and any proposed remedies where they are considered appropriate).
- 1.59 ComReg invites all interested parties to respond to the questions set out in this Further Consultation ('**Respondents**'), and/or to comment on any other aspect of the Further Consultation. In so doing, Respondents are requested to clearly explain the reasoning for their response, indicating the relevant paragraph numbers within the Further Consultation to which their response refers, along with all relevant factual evidence supporting views presented.
- 1.60 Respondents should submit views in accordance with the instructions set out below. Respondents should also be aware that all non-confidential responses to this Further Consultation will be published, subject to the provisions of ComReg's guidelines on the treatment of confidential information.⁶⁸ **Respondents should ensure that a non-confidential version of their response is provided by the closing date set out below. Confidential elements of responses must be clearly marked having regard to the following instructions and be provided to ComReg by the closing date set out below.**
- 1.61 When submitting a response to this consultation that contains confidential information, Respondents **must** choose one of the following options ('**Options**'): (a) **Option A:** Submit both a non-confidential version and a confidential version of the response. The confidential version must have all confidential information clearly marked and highlighted in accordance with the instruction set out below. The separate non-confidential version must have actually redacted all items that were marked and highlighted in the confidential version.

OR

⁶⁸ See "[Guidelines on the treatment of confidential information, ComReg document 05/24](#)" ComReg Document 05/24, "Guidelines on the treatment of confidential information", dated 22 March 2005.

- (b) **Option B:** Submit only a confidential version and ComReg will perform the required redaction to create a non-confidential version for publication. With this option, respondents must ensure that confidential information has been marked and highlighted in accordance with the instructions set out below. **Where confidential information has not been marked as per our instructions below, then ComReg will not create the non-confidential redacted version and the Respondent will have to provide the redacted non-confidential version in accordance with option A above.**
- 1.62 For ComReg to perform the redactions under Option B in paragraph 1.61 above, Respondents **must** mark and highlight all confidential information in their submission as follows:
- (a) Any confidential information contained within a paragraph must be highlighted with a chosen particular colour;
 - (b) Square brackets must be included around the confidential text (one at the start and one at the end of the relevant highlighted confidential information); and
 - (c) A scissors symbol ✂ (symbol code: Wingdings 2:38) must be included after the first square bracket.
- 1.63 For example, “Redtelecom has a market share of [✂ 25%].”
- 1.64 If choosing Option A in paragraph 1.61, the confidential version of the response must also employ the marking instructions set out in paragraph 1.62
- 1.65 All responses should be clearly marked with “**Response to ComReg Document 18/08**” and sent by post, facsimile or email to the address below to arrive on or before **17:00 on 4th of April 2018**.

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- 1.66 In submitting comments, Respondents are requested to provide a copy of their submissions in an unprotected electronic format in order to facilitate their subsequent publication by ComReg.

1.67 This is a non-confidential version of the Further Consultation. Certain information within this Further Consultation has been redacted for reasons of confidentiality, with such redactions indicated by the symbol ✂. Should an individual SP wish to review its own redacted information⁶⁹, it should make a request for such in writing to ComReg (to the person identified in paragraph 1.65 above) and indicate the specific paragraph numbers within which the redacted information being requested is contained. ComReg will consider requests for redacted information and would, subject to the protection of confidential information, respond accordingly.

1.8 Structure of this Further Consultation

1.68 The remainder of this Further Consultation is structured as follows:

- (a) Section 2 contains an executive summary of the issues and proposals for regulation/de-regulation of the relevant WHQA market(s);
- (b) Section 3 provides an overview of the main retail market developments and trends and ComReg's assessment of these and the retail LL market(s) more generally;
- (c) Section 4 defines the proposed scope of the WHQA markets from both product and geographic perspectives;
- (d) Section 5 assesses competition within each of the defined WHQA market(s), alongside the assessment as to whether any Undertaking operating within such markets holds a position of SMP;
- (e) Section 6 sets out the main competition problems that could, absent regulation, occur within the LB TI WHQA Market and adjacent markets, along with the likely consequential impacts for competition and consumers;
- (f) Section 7 discusses and sets out regulatory obligations that ComReg proposes to impose on Eircom as the proposed SMP operator in the LB TI WHQA Market, with such obligations being imposed in order to address identified competition problems;

⁶⁹ Information may not be made available where its provision would lead to a reasonable expectation that it could undermine the confidentiality of another SP's information.

- (g) Section 8 sets out the main competition problems that could, absent regulation, occur within the Zone B⁷⁰ MI WHQA Market and adjacent markets, along with the likely consequential impacts for competition and consumers;
- (h) Section 9 discusses and sets out regulatory obligations that ComReg proposes to impose on Eircom as the proposed SMP operator in the Zone B MI WHQA Market, with such obligations being imposed in order to address identified competition problems;
- (i) Section 10 sets out ComReg's approach to the removal of regulatory obligations in the HB TI WHQA Market and the Zone A MI WHQA Market, where ComReg has identified that no SP is likely to have SMP;
- (j) Section 11 sets out the Regulatory Impact Assessment ('**RIA**') on the proposed approaches to regulation in the Relevant WHQA Markets as set out in the 2016 Consultation as well as updating the RIA in light of the proposals now set out in this Further Consultation;
- (k) Section 12 sets out the next steps that will follow the publication of this Further Consultation;
- (l) Appendix: 1 (published as a separate document) contains the TERA Report referred to throughout this Further Consultation;
- (m) Appendix: 2 is a link to a Map of Ireland hosted on ComReg's website identifying the Zone A MI WHQA Market and Zone B MI WHQA Market in geographic terms;
- (n) Appendix: 3 is a list (published as a separate document) in Microsoft Excel spreadsheet format of Small Areas in the Zone A MI WHQA Market and Zone B MI WHQA Market;
- (o) Appendix: 4 sets out the draft Decision Instrument which gives legal effect to the preliminary views and positions as set out in this Further Consultation;
- (p) Appendix: 4 provides a summary overview of responses obtained from ComReg's Interviews with end-users of LLs;
- (q) Appendix: 6 updates information used to identify the main trends and developments in the LL market(s)

⁷⁰ As discussed in Section 4 of this Further Consultation, ComReg proposes to identify two separate MI WHQA Markets from a geographic perspective, namely a Zone A MI WHQA Market and a Zone B MI WHQA Market.

- (r) Appendix: 7 outlines various questions set out throughout this Further Consultation;
- (s) Appendix: 8 is a list of Eircom Trunk and Non-trunk Nodes;
- (t) Appendix: 9 describes how remedies would apply in the practice in order to allow SPs access Zone B MI WHQA services; and
- (u) Appendix: 10 sets out a list of acronyms of frequently used within this Further Consultation.

2 Executive Summary

2.1 Overview

- 2.1 This Further Consultation presents ComReg's updated analysis, further preliminary views and, in certain cases, preliminary positions on its analysis of the market(s) for Wholesale High Quality Access ('**WHQA**') services provided at a fixed location⁷¹.
- 2.2 WHQA services, also commonly known as "wholesale leased line" services, play an important role in facilitating the provision of downstream retail leased lines services, as well as being used by Service Providers ('**SP(s)**') as network inputs to extend the coverage of their networks.
- 2.3 Leased line ('**LL**') services provide dedicated high quality and reliable data connectivity between physical locations and support the provision of retail Information and Communications technology ('**ICT**'). LL services, whether retail or wholesale typically include guaranteed high quality service levels, symmetric upload and download speeds, and guaranteed service availability.
- 2.4 Typically, retail LL services are demanded by organisations in both the private and public sectors to support a wide variety of ICT applications, such as (but not limited to) access to the internet, private voice and data networks, cloud based services, backup and disaster recovery, remote monitoring and telemetry applications. Retail LL services are also used to build Virtual Private Networks ('**VPNs**') that allow organisations to link business sites together, including data centres, so that offices can exchange data and access corporate applications. This also allows retail organisations to offer a multiplicity of services to business and retail consumers via the internet or data networks.

⁷¹ Corresponding to Market 4 listed in the European Commission Recommendation 2014/710/EU of 09 October 2014 on relevant product and services markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (the '[2014 Recommendation](#)'), (OJ L 295, 11.10.2014, p. 79).

- 2.5 Apart from supporting the provision of various retail services, WHQA services can also be important network inputs for SPs themselves. In this respect, SPs can use WHQA services to extend the physical reach of their networks, including for backhauling data and/or voice traffic. This, in turn, enables them to provide a range of fixed and/or mobile communications services to consumers and business customers. Some SPs may also use WHQA as inputs to the provision of other wholesale services.
- 2.6 Currently, there are a number of SPs supplying wholesale (and retail) LL services in Ireland including Airspeed, BT Ireland, Colt, Eircom, Enet, Verizon, Viatel (Digiweb) and Virgin Media, amongst others.
- 2.7 Consistent with ComReg's regulatory role to review certain electronic communications markets, the objective of this review is to examine the extent of competition within WHQA Market(s). This involves the assessment of competition in the WHQA Market(s) in order to determine whether any operator has Significant Market Power ('**SMP**') in this Market(s). In circumstances where such market is not found to be effectively competitive due to one or more SPs being identified as having SMP, the imposition of appropriate ex ante regulatory obligations on such SP(s) might be necessary in order to address identified competition problems that could arise in the WHQA Market(s) or related markets, absent regulatory intervention. Similarly, if effective competition is found to exist within WHQA Market(s), then regulatory intervention in such Relevant WHQA Market(s) would not be warranted.
- 2.8 In August 2016 ComReg issued the 2016 Consultation⁷² that set out its then preliminary views based on an analysis of the WHQA Market(s).
- 2.9 In the 2016 Consultation, ComReg set out proposals on the definition of the WHQA Market(s) and its associated SMP assessment, as well as proposed obligations or remedies (as appropriate) that were to be imposed on any operators identified as having SMP, with a view to addressing potential competition problems to the ultimate benefit of end-users.
- 2.10 In the 2016 Consultation, ComReg identified three separate WHQA markets:
- (a) a national Low Bandwidth Traditional Interface WHQA Market consisting of analogue, digital and TDM wholesale LLs with bandwidths $\leq 2\text{Mb/s}$;

⁷² "Market Review - Wholesale High Quality Access at a Fixed Location, Consultation, [ComReg Document 16/69](#), 18 August 2016" (the '**2016 Consultation**').

- (b) a national High Bandwidth Traditional Interface WHQA Market consisting of TDM wholesale LLs with bandwidths >2Mb/s, and
 - (c) a national 'Modern Interface WHQA Market' consisting of all Ethernet, xWDM⁷³ (and other high bandwidth interfaces) LLs of any bandwidth.
- 2.11 It was proposed by ComReg that above markets would not distinguish between the different types of transmission media (wireless, fibre, copper) used to provide these wholesale LLs, i.e. they are transmission media neutral.
- 2.12 In terms of the SMP assessment in the above markets, ComReg's preliminary views in the 2016 Consultation were as follows:
- (a) Eircom is likely to have SMP in the Low Bandwidth ('LB') Traditional Interface ('TI') WHQA Market;
 - (b) No Undertaking is likely to have SMP in the High Bandwidth ('HB') TI WHQA Market; and
 - (c) No Undertaking is likely to have SMP in the Modern Interface ('MI') WHQA Market.
- 2.13 Having identified in the 2016 Consultation on a preliminary basis that Eircom has SMP in the LB TI WHQA Market, ComReg proposed to impose a range of obligations upon Eircom designed to address an identified set of competition problems that could occur, absent regulation. Such obligations largely maintained obligations that have been in place to date arising from the previous review of wholesale lease line markets in the 2008 Decision (and subsequent decisions).
- 2.14 With respect to the HB TI WHQA Market and MI WHQA Market, ComReg proposed to withdraw existing regulatory obligations given its preliminary view that no SP has SMP. In this respect, ComReg proposed that certain existing obligations would be withdrawn once ComReg makes its final decision, while for others a sunset period of between 6 to 9 months was considered appropriate in order to facilitate a smooth transition to full deregulation.
- 2.15 12 responses ('**Submission(s)**') to the Consultation were received from a range of industry stakeholders (together referred to as the '**Respondent(s)**')⁷⁴, namely:
- (a) Airspeed Communications Limited ('**Airspeed**');

⁷³ Wavelength Division Multiplexing ('**WDM**') is a technology which multiplexes a number of optical carrier signals onto a single optical fibre by using different wavelengths.

⁷⁴ Respondents' non-confidential Submissions have been published. See "Market Review: Wholesale High Quality Access at a Fixed Location, Submissions to Consultation 16/69, [ComReg Document 16/104s](#), 30 November 2016" ('**Respondents' Submissions**').

- (b) Alternative Operators in the Communications Market (**'ALTO'**);
 - (c) BT Communications Ireland Limited (**'BT'**);
 - (d) Cogent Communications Holdings Incorporated (**'Cogent'**);
 - (e) Eircom Limited (**'Eircom'**);
 - (f) e-Nasc Éireann Teoranta (**'Enet'**);
 - (g) GTT Communications Incorporated (**'GTT'**);
 - (h) HEAnet Limited (**'HEAnet'**);
 - (i) Three Ireland (Hutchison) Limited (**'Three'**);
 - (j) Verizon Ireland Limited (**'Verizon'**);
 - (k) Virgin Media Ireland Limited (**'Virgin Media'**); and
 - (l) Vodafone Ireland Limited (**'Vodafone'**).
- 2.16 ComReg has taken account of the Respondents' Submissions in arriving at the further preliminary views and preliminary positions set out in this Further Consultation.
- 2.17 In parallel with the consultation process, ComReg also sought additional quantitative and factual information from relevant SPs. This information, which is of better quality and granularity to that which was available at the time of the 2016 Consultation, supplements other quantitative information available to ComReg.
- 2.18 As further discussed below, ComReg has now set out its intention to amend some of its preliminary views as set out in the 2016 Consultation, primarily in relation to the definition of the MI WHQA Market and, as a consequence, the associated competition assessment and remedies.

- 2.19 In summary, ComReg has set out its further preliminary view that MI WHQA LLs provided over point-to-point ('P2P') radio links are not likely to be an effective substitute for wired MI WHQA connectivity. Furthermore, ComReg considers that there are likely to be two separate geographic MI WHQA Markets, a '**Zone A**' MI WHQA Market and a '**Zone B**' MI WHQA Market. Each zone corresponds to a specific geographic area distinguishable according to a grouping of 'Small Areas'⁷⁵, where ComReg considers that the conditions of competition in Zone A are similar or sufficiently homogeneous and which can be distinguished from the Zone B area in which the prevailing conditions of competition are appreciably different. Such differences in the conditions of competition between Zone A and Zone B arise as a result of the presence of competing infrastructure and consequently, the number of competing service providers present and the associated competitive dynamics.
- 2.20 Insofar as the LB TI WHQA Market and the HB TI WHQA Market are concerned, ComReg's preliminary position is that the definition of such markets as set out in the 2016 Consultation remains appropriate.
- 2.21 In assessing competition within the Relevant WHQA Markets ComReg considers that:
- (a) Eircom is likely to have SMP in the LB TI WHQA Market;
 - (b) No Undertaking is likely to have SMP in the HB TI WHQA Market;
 - (c) No Undertaking is likely to have SMP in the Zone A MI WHQA Market; and
 - (d) Eircom is likely to have SMP in the Zone B MI WHQA Market.
- 2.22 In this Further Consultation, ComReg specifies how it is going to promote the development of retail competition by imposing wholesale regulatory obligations on Eircom in the LB TI WHQA Market and the Zone B MI WHQA Market.
- 2.23 The non-pricing obligations that ComReg intends to impose include Access, Transparency, Non Discrimination, Accounting Separation in the LB TI WHQA market and the Zone B MI WHQA market.
- 2.24 Insofar as the LB TI WHQA Market is concerned the access obligations are primarily based on the products and services that are currently imposed under the 2008 Decision, with all relevant obligations having their wording updated to reflect current regulatory practice.

⁷⁵ Small Areas have been developed by Ordnance Survey Ireland ('OSI') for the Central Statistics Office ('CSO'). See <http://www.cso.ie/en/census/census2016reports/census2016smallareapopulationstatistics/> for more details.

- 2.25 Similarly in the Zone B MI WHA Market, ComReg has also brought the wording of all regulatory obligations in line with current regulatory practice. Access obligations are primarily based on the products and services that are currently imposed under the 2008 Decision. However, ComReg also intends to impose a suite of interconnection obligations in the MI WHQA Market, irrespective of whether it is Zone A or Zone B in order to facilitate competition in the Zone B MI WHQA market and related retail MI LL markets. Additionally, given that MI WHQA services continue to grow in volume, and having regard to their importance in facilitating downstream competition (including within the retail MI LL market), ComReg considers it justified and proportionate to expand and develop a number of existing regulatory obligations, particularly in the area of requirements governing SLAs negotiation periods, transparency regarding product development and the provision of a Statement of Compliance in relation to these obligations by Eircom.
- 2.26 In relation to pricing obligations, ComReg intends to impose cost-orientated prices for all regulated services in both the LB TI WHQA Market and the Zone B MI WHQA Market. This includes cost orientation on all ancillary services such as interconnection for Zone B MI WHQA services.
- 2.27 These obligations are intended to address potential competition problems arising from Eircom's SMP in these markets, along with its ability and incentives to behave in an anti-competitive manner.
- 2.28 With respect to the HB TI WHQA Market and Zone A MI WHQA Market, ComReg's preliminary position is that regulation of these markets is no longer warranted given that barriers to entry have been overcome, and that the market is tending towards effective competition. In particular, there is evidence of existing competition within the Zone A MI WHQA Market, given that a number of SPs with their own physical infrastructure are competing in retail LL and WHQA markets.
- 2.29 Below, ComReg provides an overview of the main preliminary views and preliminary positions set out in this Further Consultation.

2.2 Summary of Overall Preliminary Views and Preliminary Positions

- 2.30 The following is a summary of ComReg's main preliminary views and positions arising from its review of the Relevant WHQA Markets.
- 2.31 ComReg notes that this summary should be read in the context of the analysis set out in this Further Consultation (and the 2016 Consultation), where a detailed explanation of the reasons behind these preliminary views and positions is set out.

2.2.1 Retail Market Assessment

- 2.32 In Section 3 of this Further Consultation, having considered Respondents' Submissions, ComReg sets out its preliminary views and positions on the main retail trends and developments and assesses the retail market insofar as it informs ComReg's subsequent assessment of the Relevant WHQA Markets. As explained in the 2016 Consultation⁷⁶, ComReg is not obliged to conclude on a precise definition of the retail LL markets.
- 2.33 In this context, ComReg's preliminary position is that the retail LL markets are as follows (from a product perspective, these market definitions largely mirror the Relevant WHQA Markets identified in Section 4 of this Further Consultation given that wholesale demand is typically derived from retail demand):
- (a) a LB TI Retail Market consisting of analogue, digital and TDM retail LLs with bandwidths $\leq 2\text{Mb/s}$;
 - (b) a HB TI Retail Market consisting of TDM retail LLs with bandwidths $> 2\text{Mb/s}$, and
 - (c) a MI Retail Market consisting of all Ethernet, xWDM (and other modern high bandwidth interfaces) retail LLs of any bandwidth.
- 2.34 The above, together referred to as the **Relevant Retail LL Markets**, include retail LLs provided over copper and fibre transmission media. They do not include retail LLs provided over wireless infrastructure, with this being a change to ComReg's preliminary view as set out in the 2016 Consultation.
- 2.35 ComReg considers that the Relevant Retail LL Markets are likely to be national in scope. In the context of the definition of the MI WHQA Markets discussed in Section 4 of this Further Consultation, ComReg has set out its preliminary views that separate subnational geographic markets exist. However, ComReg does not consider that these differences are likely to be replicated in the Retail LL MI Market. This includes reasons such as the nature of retail demand being such that multi-site retail LL customers, who have multiple premises in geographically dispersed locations, tend to require a single vendor to provide all their connectivity needs across such locations.
- 2.36 Asymmetric business broadband is not considered a substitute for a retail LL due to the likely lack of effective supply and demand side substitutability between these products.

⁷⁶ See paragraph 4.1 of the 2016 Consultation.

- 2.37 Passive infrastructure, such as dark fibre, is also not considered to be an effective substitute for a retail LL due to the investment and expertise needed to provide retail LL using such passive infrastructure.
- 2.38 Furthermore, in contrast to the preliminary view set out in the 2016 Consultation that MI WHQA LLs provided over P2P wireless (microwave radio) links are not now considered to be part of the Retail MI LL Markets. This changes is due, amongst other thing, to the analysis of information gathered from stakeholders for use in this Further Consultation that suggests that P2P wireless links are not likely to be a sufficiently effective substitute for retail MI LLs provided over wired infrastructure. As such, they are not considered to be part of the same market.
- 2.39 The rationale and analysis to support the above definitions of the Relevant Retail LL Markets is discussed throughout Section 3 of this Further Consultation.

2.2.2 WHQA Market Definition and SMP Assessment

Definition of the WHQA markets

- 2.40 In Section 4 of this Further Consultation ComReg considers the definition of the Relevant WHQA Market(s) from a product and geographic perspective. This wholesale analysis is also informed by ComReg's assessment of the retail trends and the retail market in Section 3 of this Further Consultation.
- 2.41 ComReg has proposed to define four separate WHQA markets having regard to an assessment of demand-side and supply-side conditions, as well as the effectiveness of indirect constraints emanating from the Relevant Retail LL Markets. These markets (together referred to as the '**Relevant WHQA Markets**') are summarised below.
- (a) a national **Low Bandwidth TI WHQA Market** consisting of analogue, digital and TDM wholesale LLs with bandwidths $\leq 2\text{Mb/s}$;
 - (b) a national **High Bandwidth TI WHQA Market** consisting of TDM wholesale LLs with bandwidths $> 2\text{Mb/s}$; and
 - (c) two separate geographically differentiated '**MI WHQA Markets**' consisting of all Ethernet, xWDM (and other high bandwidth interfaces) LLs of any bandwidth, in particular:

- (i) a Zone A MI WHQA Market consisting of all Ethernet, xWDM (and other high bandwidth interfaces) LLs of any bandwidth, with Zone A corresponding to an identified specific set of 3,048 Small Areas ('SA(s)')⁷⁷ which cover approximately 6,300 wired MI WHQA connected business premises in the State; and
- (ii) a Zone B MI WHQA Market consisting of all Ethernet, xWDM (and other high bandwidth interfaces) LLs of any bandwidth, with Zone B corresponding to an identified set of 15,593 Small Areas, which cover approximately 3,300 wired MI WHQA connected business premises in the State.

2.42 The above, together referred to as the **Relevant WHQA Markets**, include wholesale LLs provided over copper and fibre transmission media. They do not include Wholesale LLs provided over wireless infrastructure, with this being a change to ComReg's preliminary view as set out in the 2016 Consultation.

2.43 The LB TI WHQA Market and HB TI WHQA Market are, save for the exclusion of wireless WHQA LLs, are consistent with what was proposed in the 2016 Consultation. The MI WHQA Markets, which also exclude wireless WHQA LLs, are however now different from a geographic perspective, with this being largely as a consequence of ComReg's consideration of Respondents' views and additional analysis enabled by better quality information being available from SPs in relation to connected premises locations.

The Trunk-Terminating Boundary

2.44 The 2008 Decision defined the wholesale trunk market as consisting of 16 (later updated to 20) Urban Centres which were connected by large circuits with a bandwidth delineation of 155Mb/s. This was then based on now legacy TI infrastructure as the Ethernet market volumes (wholesale and retail) were trivial in 2008.

⁷⁷ As noted in Section 4, Small Areas have been developed by Ordinance Survey Ireland ('OSI') for the Central Statistics Office ('CSO'). See <http://www.cso.ie/en/census/census2016reports/census2016smallareapopulationstatistics/> for more details.

- 2.45 The proposed updated boundary required a detailed inspection of the 192 Eircom NGN Exchanges at which interconnection is feasible (**'Aggregation Nodes'**) compared to the mapping information provided by all relevant alternative SPs and upstream infrastructure providers. It was found that 107 of these nodes have 2 or more alternate infrastructures present (or a "Competitive" Enet MAN) within sufficient proximity to allow at least 2 alternate SPs interconnect. ComReg is suggesting that these nodes are designated as "Trunk Nodes" and delineate the MI WHQA trunk-terminating boundary.
- 2.46 The rationale and analysis to support the above definitions of the Relevant WHQA Markets is discussed throughout Section 4 of this Further Consultation.

SMP assessment in the relevant WHQA markets

- 2.47 In Section 5 of this Further Consultation, ComReg assesses whether, absent regulation, any Undertaking has SMP in any of the Relevant WHQA Markets, that is, the ability to act, to an appreciable extent, independently of its competitors, customers and consumers.
- 2.48 In this respect, ComReg has examined a number of factors relating to existing competition, potential competition and countervailing buyer power (**'CBP'**). ComReg's preliminary position is that:
- (a) Eircom is likely to have SMP in **Low Bandwidth TI WHQA Market**;
 - (b) No SP is likely to have SMP in **High Bandwidth TI WHQA Market**;
 - (c) No SP is likely to have SMP in the **Zone A MI WHQA Market**;
 - (d) Eircom is likely to have SMP in the **Zone B MI WHQA Market**.

Low Bandwidth TI WHQA Market SMP assessment

- 2.49 LB TI WHQA demand is in slow decline with the number of circuits declining from approximately 9,300 in 2013 to approximately 4,600 in 2016. The demand for these circuits is likely to gradually decline further over the lifetime of this market review as retail (and consequently) wholesale demand is ultimately migrated to the MI LLS.
- 2.50 ComReg has set out its preliminary position that Eircom is likely to have SMP in the LB TI WHQA Market. This is due to factors such as its high (and increasing) market share, its control of infrastructure not easily duplicated, the lack of potential competition and the absence of effective CBP.
- 2.51 At the end of 2016, Eircom had a market share well in excess of 50%. There is only one other main SP active in the LB TI WHQA Market, namely BT, with a market share less than 15%.

- 2.52 Furthermore, as these TI LLs are of a legacy technology nature, it is unlikely that any SP will invest in providing such services in the future, with negligible anticipated new demand.
- 2.53 Eircom's ubiquitous copper network which it uses to provide these services is unlikely to be replicated by other SPs. As such, potential competition is not likely to contribute towards effective competition for the duration of this review.

High Bandwidth TI WHQA Market SMP assessment

- 2.54 In 2016 there were less than 170 HB TI WHQA LL circuits in-situ having fallen from under 290 in 2013 and with minimal new demand for such LLs.
- 2.55 Given the low and declining volumes in this market, market shares in and of themselves are not a reliable indicator of competition. In the context of a small and declining market, ComReg has set out its preliminary position that no SP has SMP and that continued regulation of this market is not proportionate or justified.

Zone A MI WHQA market SMP assessment

- 2.56 As a result of the detailed granular geographic assessment of the MI WHQA market, ComReg has delineated two distinct geographic markets for MI WHQA, - namely Zone A and Zone B.
- 2.57 In relation to the Zone A MI WHQA market, ComReg notes that given the number of competing SPs, the scale and scope of infrastructure based competition suggests that entry barriers are lower and appear to have been sufficiently overcome in this market. Considering this, alongside the market shares of the competing SPs (as well as other factors), ComReg considers that it is unlikely that any SP has SMP in the Zone A MI WHQA Market.

Zone B MI WHQA market SMP assessment

- 2.58 In contrast to the Zone A MI WHQA market, the Zone B MI WHQA is not considered to be effectively competitive. This is due to the fact that there is relatively little infrastructure based competition. Entry barriers are high and are expected to remain so for the duration of this market review. Furthermore, Eircom has a high market share that is not considered to decrease significantly over the period of this review. Consequently, Eircom are considered to have SMP in the Zone B MI WHQA market.
- 2.59 The rationale and analysis to support the above definitions and assessment of the Relevant WHQA Markets is discussed throughout Section 4 and 5 of this Further Consultation.

Competition problems and remedies

Competition problems in the LB TI WHQA Market and the Zone B MI WQHA Market

2.60 In Sections 6 and 8 of this Further Consultation ComReg identifies potential competition problems that could arise, absent regulation, from Eircom's ability and incentive to exercise market power in the LB TI WHQA Market and Zone B MI WHQA Market respectively (and related markets). In the absence of regulation in these markets, ComReg considers that Eircom would have the ability and incentive to engage in a range of anti-competitive behaviours including: excessive pricing (including with respect to charges for SPs); vertical leveraging behaviours into downstream markets; and horizontal leveraging behaviours with a view to negatively impacting the position of its competitors in adjacent markets within which Eircom also competes.

Remedies in the LB TI WHQA market

2.61 In order to address these competition problems, in Section 6 of this Further Consultation ComReg considers and proposes to impose upon Eircom a range of access, non-discrimination, transparency, price control/cost accounting and accounting separation obligations in the LB TI WHQA Market. Such obligations largely mirror the obligations already in place and are consistent with what was proposed in the 2016 Consultation.

2.62 However, ComReg has decided to impose remedies for TDM based wholesale Partial Private Circuits ('PPCs') only. This is because in relation to the two other LB TI WHQA LL products (analogue and end-to-end WLLs):

- (a) retail digital LLs can be replicated by an Access Seeker having access to a PPC; and
- (b) there are currently 4 Analogue wholesale LLs in-situ from Eircom, the most recent of these installed in 2002.

2.63 As such, ComReg's position is that it is reasonable and proportionate to impose the suite of obligations identified in Section 7 and to impose them only in respect of TDM based WHQA PPCs.

2.64 Furthermore, ComReg is of the view that after undertaking a detailed cost modelling exercise and to give certainty to stakeholders, that pricing for the PPC products in the regulated services in the LB TI WHQA market should remain at their current level.

2.65 The detail of these obligations, which are ultimately designed to ensure effective competition in retail and adjacent wholesale markets, is set out in Section 7 of this Further Consultation.

Remedies in the Zone B MI WHQA market

- 2.66 In order to address the competition problems identified in the Zone B MI WHQA market, in Section 8 of this Further Consultation ComReg considers and proposes to impose upon Eircom a range of access, non-discrimination, transparency, price control/cost accounting and accounting separation obligations in the Zone B MI WHQA Market. No obligations were proposed in the 2016 Consultation given ComReg's then preliminary view that no SP was likely to have SMP in a national MI WHQA market. However, the access obligations now proposed largely mirror the obligations already in place, save for some changes which either remove some existing obligations (such as those relating to end-to-end WHQA products). ComReg has also expanded some existing obligations to bring them up to current regulatory standards and/or improve their effectiveness. These relate mainly to enhanced interconnection obligations, SLAs, transparency on product development and a requirement for Eircom to provide a Statement of Compliance in relation to the same.
- 2.67 Furthermore, ComReg proposes to impose cost-orientation on regulated products and ancillary services. However, ComReg proposes to remove the previously imposed Margin-Squeeze Test detailed in the 2012 Pricing Decision which currently applies and other obligations associated with the Margin-Squeeze Test.
- 2.68 The detail of these proposed obligations, which are ultimately designed to ensure effective competition in retail and adjacent wholesale markets, are set out in Section 9.

Regulatory Effectiveness

- 2.69 ComReg notes that in future regulation may require amendment, including updating or extension, in order to be continuously effective and to address competition concerns. ComReg also notes Eircom's August 2015⁷⁸ and May 2016⁷⁹ Regulatory Governance Model ('**RGM**') reports (together, the '**Eircom RGM Updates**'). In July 2017, ComReg published a call for inputs (the '**RGM Call for Input**')⁸⁰ with supporting reports (the '**KPMG Report**'⁸¹ and '**Cartesian Report**',⁸² (together the '**Consultants' RGM Reports**') and sought the views of interested parties in respect of the contents of the Consultants' RGM Reports.
- 2.70 ComReg's RGM Call for Input notes that the contents of the Consultants' RGM Reports raise serious concerns about the quality of Eircom's regulatory governance. In this respect, for example, the KPMG Report has noted the need to improve the governance and operational independence currently afforded to Eircom's Wholesale Division from other parts of the organisation and has recommended that Eircom enhance its regulatory governance structures in a number of areas.

⁷⁸ Industry Update on Eircom's Regulatory Governance Model (RGM) – August 2015, https://www.eir.ie/opencms/export/sites/default/.content/pdf/regulatoryinformation/regulatory_governance_model.pdf ('**August 2015 RGM Update**').

⁷⁹ Industry Update on Eircom's Regulatory Governance Model (RGM) – May 2016 https://www.eir.ie/opencms/export/sites/default/.content/pdf/regulatoryinformation/industry_update_2016.pdf ('**May 2016 RGM Update**').

⁸⁰ Review of Eir's Regulatory Governance Model, Publication of Reports and Call for Input, July 2017 [ComReg Document No.17/64](#).

⁸¹ See Review of eir's Regulatory Governance Model, KPMG, July 2017, [ComReg Document No.17/64\(a\)](#) ('**KPMG Report**').

⁸² Operational Assessment of eir's Regulatory Governance Model, Cartesian, July 2017, [ComReg Document No.17/64\(b\)](#) ('**Cartesian Report**').

2.71 ComReg has also initiated a follow-on project to identify what regulatory measures would be appropriate to address the issues identified in the Reports, having regard to ComReg's 'standard' SMP powers (under Regulations 8, 9, 10, 12) but also under Regulation 8(5) and Regulation 14 of the Access Regulations (the '**RGM Project**'). While the scope of the RGM Consultants' Reports did not include specific services provided in the WHQA Markets, ComReg is nevertheless of the view that many of the findings could be relevant to the WHQA Markets. The RGM Project will assess this and will decide what, if any, additional measures may be necessary to ensure the effective implementation of the obligations set out in this Further Consultation.

2.3 Next Steps

- 2.72 ComReg invites views from interested parties on the issues analysed in this Further Consultation, with the procedure and deadline for the submission of responses set out in paragraph 1.65 above. To facilitate a smooth transitional period to de-regulation, in Section 10 of this Further Consultation, ComReg has proposed that a six month sunset period⁸³ for the withdrawal of the majority of existing remedies relating to LLs provided in the High Bandwidth TI WHQA Market and a 12 month period for the withdrawal of obligations in the Zone A MI WHQA Market are appropriate, reasonable and proportionate.
- 2.73 ComReg intends to continue to closely monitor developments in the LL markets and to examine, whether in light of retail developments, regulation within the LB TI WHQA Market remains appropriate. ComReg will also continue to monitor the HB TI WHQA Market and MI WHQA Markets, to ensure that effective competition is taking place, when and if a new regulatory regime has been applied to the market.

⁸³ Individual orders delivered before any sunset period would still be subject to any corresponding contractual minimum term periods.

3 Retail Market Developments, Trends and Assessment

3.1 Given the overlap in comments/issues raised in response to Sections 3 (Retail Market Trends and Developments) and 4 (Retail Market Assessment) of the 2016 Consultation, these two sections are considered together below in this Section 3 of this Further Consultation.

3.1 Preliminary views set out in the 2016 Consultation

3.2 In sections 3 and 4 of the 2016 Consultation, ComReg set out its preliminary views on recent trends/developments in the supply of retail LL in Ireland since the 2008 Decision along with its preliminary assessment of the retail LL market(s). These preliminary views are summarised below.

3.1.1 Retail Trends and Developments

3.3 The main trends/developments in the retail LL market as discussed in Section 3 of the Consultation, included:

- (a) **An overview of providers of retail LL services⁸⁴:** ComReg described, in general terms, the main SPs⁸⁵ offering retail and/or wholesale LL services noting that the retail LL market(s) are becoming increasingly competitive as evident from the declining market concentration levels. It was noted that several SPs have increased their market share in terms of active retail LL circuits and LL revenue since the 2008 Decision with a mix of technologies/platforms used by these SPs to provide LL services⁸⁶;

⁸⁴ See paragraphs 3.3 to 3.26 of the 2016 Consultation.

⁸⁵ Eircom Ltd. ('**Eircom**'), BT Ireland Ltd. ('**BT**'), Vodafone Ireland Ltd. ('**Vodafone**'), Verizon Ireland Ltd. ('**Verizon**'), Digiweb Ltd. ('**Digiweb**'), Airspeed Communications ('**Airspeed**'), Colt Technology Services Ltd. ('**Colt**'), Virgin Media Ireland Ltd. ('**Virgin Media**'), e-Nasc Eireann Teoranta ('**Enet**') and ESB Telecom Ltd. ('**ESBT**').

⁸⁶ See Table 1 of the 2016 Consultation.

- (b) **Migration from analogue and TDM to Ethernet, xWDM and other MI based retail LL services⁸⁷**: ComReg noted an overall increase in demand for retail LL services in Ireland with significant growth of MI⁸⁸ LL services and a steady decline in TI⁸⁹ services, although it was noted that TI LL still account for a significant proportion (33.8% as at the end of Q4 2015) of all live retail LL circuits. Significant improvements in LL access technologies as well as the change in nature of the services and products being supplied using these access technologies (e.g. cloud services, and various e-Commerce services) was also highlighted. ComReg also noted that these developments have resulted in a greater concentration of IT infrastructure in large data centres in Ireland;
- (c) **Increased demand for LL services from non-commercial (State) sector⁹⁰**: Growth in the number of retail LL circuits purchased by non-commercial organisations was highlighted with Government Networks ('GN')⁹¹ and HEAnet⁹² managing the provision of data connectivity services to Government agencies (e.g. Department of Health) and second level schools as well as 3rd level education institutions respectively;
- (d) **Increasing take-up of (P2P) wireless Ethernet retail LLs⁹³**: Since the 2008 Decision there has been a growth in the number of retail LLs provided over point-to-point ('P2P') radio links. ComReg noted that wireless technologies are capable of delivering P2p symmetrical connectivity at bandwidths of up to 1Gb/s depending on the distance between radio high sites and the customer premises⁹⁴;

⁸⁷ See paragraphs 3.27 to 3.34 of the 2016 Consultation.

⁸⁸ Modern Interface refers to LL interfaces such as Ethernet, xWDM and other such high bandwidth LL technologies.

⁸⁹ Traditional Interface refers to interfaces such as Analogue, Digital and TDM interfaces.

⁹⁰ See paragraphs 3.35 to 3.37 of the 2016 Consultation.

⁹¹ See paragraph 3.35 of the 2016 Consultation. Further information available at <http://ictprocurement.gov.ie/government-networks/>.

⁹² See paragraph 3.36 of the 2016 Consultation. Further information is available at <http://www.heanet.ie/>.

⁹³ Refer to paragraph 3.38 and Appendix: 6 Updated Trends.

⁹⁴ Please note that such LLs are no longer considered to be part of the market. P2P links have not seen a quantity increase in demand in 2016, see 3.118 to 3.153 below.

- (e) **Growth in the take-up of higher bandwidth LLs:** The increasing demand for higher bandwidth LL services was highlighted as end-users' data usage is growing. In particular, the growth in the number of Ethernet circuits delivering 1Gb/s bandwidth and circuits based on technologies such as xWDM that are capable of delivering very high bandwidth capacity in excess of 10 Gb/s was noted;
- (f) **Tendency for retail LL to be purchased in a bundle with other services⁹⁵:** ComReg has identified a strong tendency for retail LL to be purchased as part of a wider network solution or telecoms package; and
- (g) **Increasing availability of fibre and P2P wireless infrastructure and an overview of Fibre Network deployment by SPs⁹⁶:** The evidence of increasing availability of infrastructure capable of providing LL services throughout the state, not only from Eircom, but also from Enet (via MANs network), BT, Digiweb and Vodafone as well as infrastructure providers such as Aurora Network and EU Networks was presented. ComReg also noted the establishment and expansion of footprints of wireless SPs such as Airspeed and Digiweb. Fibre network deployment by Eircom, Virgin Media, SIRO⁹⁷ was also noted as well as the proposed National Broadband Plan ('**NBP**') which will support the provision of broadband access to households and businesses that currently fall outside the reach of existing broadband networks⁹⁸.

⁹⁵ See paragraphs 3.48 to 3.50 of the 2016 Consultation.

⁹⁶ See paragraphs 3.51 to 3.67 of the 2016 Consultation.

⁹⁷ In July 2014, ESB and Vodafone Ireland, announced a fully functioning 50:50 Joint Venture ('**JV**') named SIRO. See <http://siro.ie/> for details.

⁹⁸ It is envisaged that the wholesale network supporting broadband access could also be leveraged to provide retail LL services.

3.1.2 Retail Market Assessment

- 3.4 Having identified the key market trends and developments, and having regard to the 2014 Market Research as well as other data available to it, ComReg set out its preliminary opinion on the likely scope of the retail LL market from a product and geographic perspective. As explained in the 2016 Consultation⁹⁹, ComReg is not obliged to conclude on a precise definition of the retail LL market(s). The purpose of its assessment was to inform ComReg's subsequent review of the WHQA market in Sections 5, 6 and 7 of the 2016 Consultation (and the subsequent decision to be made). ComReg's preliminary view of the market for provision of retail LLs set out in Section 4 of the 2016 Consultation was as outlined below.
- 3.5 As a first step, ComReg sought to identify the likely scope of the retail LL market(s). ComReg's preliminary view was that:
- (a) Asymmetric business broadband services are not likely to fall within the same market as retail LLs due to, amongst other things, sufficient differences in product characteristics (e.g. symmetrical upload/download speed, service availability, resilience and low latency/jitter) and pricing as well as relatively low substitutability levels between retail LLs and business broadband services. However, ComReg considered that Ethernet First Mile ('EFM') services¹⁰⁰, exhibit some characteristics that are similar to those of retail LL services¹⁰¹ and thus, are likely to be in the same market as retail MI LLs. This preliminary view was also supported by observed pricing and marketing evidence related to EFM services.¹⁰²

⁹⁹ See paragraph 4.1 of the 2016 Consultation.

¹⁰⁰ EFM is a set of specifications that allow SPs to run Ethernet over multiple bonded copper pairs in the access segment to connect the "first mile" from the customer to the nearest node.

¹⁰¹ From the end-user perspective EFM service has the same interface as an Ethernet based LL.

¹⁰² See paragraphs 4.9 to 4.57 of the 2016 Consultation.

- (b) LLs provided over a P2P wireless medium were considered likely to be a suitable alternative to LLs provided over a wired medium due to similar product characteristics¹⁰³ and pricing. Since 2009 there has been a 25% increase in the number of P2P radio links and the share of retail LLs provided via wireless links increased from 12.4% in 2013 to 17.3% in 2015. Apart from a small area of Dublin and only for certain bands within this area, there were no spectrum scarcity and/or congestion issues that would limit the number of P2P radio links from meeting demand for retail LLs over the period of the review¹⁰⁴.
 - (c) The degree of competitive constraint posed by passive infrastructure such as dark fibre services was not likely to be sufficient such that it would warrant their inclusion in retail LL market(s) due to the investment and expertise needed to provide retail LL using such passive infrastructure¹⁰⁵.
- 3.6 After assessing the broad scope of the retail LL market(s), ComReg considered whether single or multiple distinct retail LL markets exist. In this regard, ComReg's preliminary view was that:
- (a) The appropriate focal point for the assessment of potential retail LL substitutes was Ethernet interface LLs (whether sold on a standalone basis or in a bundle with other services) which constituted the majority of sold LLs in Ireland at the end of 2015 (approximately 66%)¹⁰⁶.
 - (b) The 2014 Market Research suggested that end-users of retail LL have various degrees of retail LL cost awareness as well as differing levels of sensitivity to changes in these costs. However, most of businesses purchasing LL services have noted that they have an ability to negotiate terms and conditions with their SP. This indicated that a sizeable proportion of LL purchasers are likely to have some degree of cost awareness and sensitivity to changes in LL prices, in particular, when selecting their retail LL SP and during contract negotiation stage¹⁰⁷.

¹⁰³ It was noted that with the exception of very high bandwidths (>300Mb/s), P2P radio links offer a comparable service in terms of bandwidth, symmetry, SLAs and other characteristics to wired LLs.

¹⁰⁴ See paragraphs 4.58 to 4.89 of the 2016 Consultation.

¹⁰⁵ See paragraphs 4.90 to 4.97 of the 2016 Consultation.

¹⁰⁶ See paragraphs 4.100 to 4.109 of the 2016 Consultation.

¹⁰⁷ See paragraphs 4.110 to 4.137 of the 2016 Consultation.

- 3.7 The analysis of LL product characteristics and pricing, the intended use of LL services, observed demand and supply side substitution patterns as well as consideration of LL SPs' views led to ComReg's preliminary conclusion in the 2016 Consultation that there were likely to be three distinct retail LL markets together referred to as the '**Relevant Retail Markets**'¹⁰⁸. These were:
- (a) A Low Bandwidth Traditional Interface ('**TI**') Retail Product Market consisting of all retail LLs carried over analogue, digital and TDM interfaces with speed of ≤ 2 Mb/s¹⁰⁹ (the '**Low Bandwidth (LB) TI Retail Product Market**'); and
 - (b) A High Bandwidth TI Retail Product Market which consists of all retail LLs provided over a TDM interface with speeds > 2 Mb/s (the '**High Bandwidth (HB) TI Retail Product Market**'); and
 - (c) A Modern Interface ('**MI**') Retail Product Market consisting of all retail LLs carried over modern technology interfaces such as Ethernet, EFM, xWDM and other high bandwidth interfaces such as FDDI¹¹⁰ and FICON¹¹¹ (the '**MI Retail Product Market**').
- 3.8 Finally, ComReg sought to define the likely geographic scope of the above retail LL markets. ComReg's preliminary view was that there was insufficient evidence to suggest that subnational retail LL markets exist for any of the Relevant Retail Markets. Although the presence of SPs' own network ('**on-net**')¹¹² infrastructure is higher in urban Business Parks, Data Centres and campuses of Higher Education Providers (collectively referred to as '**Business Parks**'), thus potentially indicating a greater intensity of competition for the supply of retail MI LLs in these areas, ComReg noted that there was no material evidence of LL service, functionality or price/marketing differentiation on a geographic basis that might indicate the presence of different regional or local competitive conditions¹¹³.

¹⁰⁸ See paragraphs 4.138 to 4.208 of the 2016 Consultation.

¹⁰⁹ ComReg's preliminary view was that there is a break in the chain of substitution between TI LL services at 2Mb/s. Retail TI LLs with bandwidth > 2 Mb/s were, therefore, considered to fall within a separate market to those with bandwidth ≤ 2 Mb/s. See paragraphs 4.188 to 4.190 of the 2016 Consultation.

¹¹⁰ Fibre Distributed Data Interface ('**FDDI**').

¹¹¹ Fibre Connection.

¹¹² Throughout this Further Consultation ('**on-net**') term refers to a situation where the access portion of LL was either delivered entirely and exclusively based on the SP's own local access infrastructure (e.g. SP fixed wire or wireless media to connect the customer premises to its network) or SP's use of upstream physical infrastructure inputs such as dark fibre or LLU connected between a SP's active equipment.

¹¹³ See paragraphs 4.209 to 4.238 of the 2016 Consultation.

3.2 Respondents' Views

3.9 Below ComReg summarises Respondents' views on:

- (d) the Retail Trends and Developments (discussed in paragraphs 3.10 to 3.26 below); and
- (e) the Retail Market Assessment (discussed in paragraphs 3.27 to 3.46 below)

3.2.1 Respondents' views on Retail Trends and Developments

- 3.10 6 out of 12 Respondents expressed views on ComReg's assessment of the main trends and developments in the provision of retail LLs.
- 3.11 ALTO, Eircom, Enet, HEAnet and Vodafone agreed with ComReg's overall assessment of trends and developments in the provision of retail LLs, in some cases commenting on particular aspects of the analysis.
- 3.12 BT did not explicitly agree or disagree with ComReg's assessment, but provided comments and observations on particular aspects of the analysis.
- 3.13 ComReg has summarised the Respondents' main views below, grouping the key issues raised into the following identified themes:
 - (a) The availability of fibre infrastructure has been overestimated (see paragraphs 3.14 to 3.17 below);
 - (b) Failure to recognise the multi-site nature of retail LL purchases (see paragraphs 3.17 to 3.19 below);
 - (c) Other key developments affecting the provision of retail LL have not been adequately taken into account (see paragraphs 3.20 to 3.24 below); and
 - (d) Quality of information obtained via SIRs (see paragraph 3.25 below).

The availability of fibre infrastructure has been overestimated

- 3.14 Vodafone and ALTO disagreed that some LL SPs have developed quasi-national footprints. ALTO noted that SPs have not been able to replicate Eircom's ubiquitous access network and was of the view that in many cases ALTO members must rely on Eircom's and Enet's wholesale services in order to compete at the retail level.
- 3.15 Vodafone highlighted the lack of availability of network maps in the 2016 Consultation that would indicate SPs' network presence. Vodafone considered that such maps would indicate the degree of SPs' reliance on Eircom's network.

- 3.16 HEAnet stated that the availability of fibre infrastructure is typically restricted to large city centres and business parks. In HEAnet's view, outside of these areas fibre infrastructure is only available via Eircom and Enet.
- 3.17 Enet agreed with ComReg's analysis in relation to technological developments in the supply of retail LLs and the tendency of LLs to be purchased in a bundle with other services. However, Enet argued that, despite the presence of alternative SPs supplying WHQA products and an increased demand for wireless LLs, Eircom is the sole option for WHQA products not only in remote locations, but also in parts of Dublin and other urban areas.

Failure to recognise the importance of multi-site retail LL customers

- 3.18 Enet considered that ComReg's analysis had failed to take into account the fact that LLs are typically purchased on a multi-site basis. In Enet's view, this trend means that ComReg has underestimated SPs' reliance on Eircom, given that for multi-site orders SPs would need to purchase WHQA products from Eircom at least for some of the site locations. In particular, Enet noted that it had a dependency on Eircom's WHQA services and in this regard stated that [REDACTED]. Enet speculated, that if Eircom were to withdraw the supply of WHQA products to other SPs, Eircom would become the only provider able to fulfil multi-site retail orders.
- 3.19 Vodafone presented evidence of its reliance on Eircom's WHQA products when providing retail LLs to multi-site customers that require nationwide service availability. In this regard, Vodafone expressed the view that Eircom's WHQA products are the only available option for connecting some of such customers' sites.
- 3.20 BT noted that multi-site customers are likely to purchase the majority of retail LLs. In this regard, BT highlighted industry's dependency on Eircom's regulated WHQA services and stated in its Response to Consultation that Eircom remained the only economic option to serve customer sites in many instances due to the skeletal nature of alternate networks. Thus, it argued that alternate operators such as itself are dependent on Eircom in Dublin and Eircom and Enet in areas outside Dublin to connect customers. [REDACTED].

- 3.21 Airspeed noted that their ability to supply services to multi-site customers would be hindered in the absence of regulation in the MI WHQA market as some of the customers' sites are supplied using Eircom's WHQA services as it is the sole viable option for fibre access.

Other key developments affecting the provision of retail LLs have not been adequately taken into account

- 3.22 Eircom, while agreeing that ComReg has identified some of the main trends of relevance to the assessment of WHQA market, considered that ComReg's analysis had failed to take adequate account of market developments such as broadband substitution; the increased availability of dark fibre; market consolidation; and the growing importance of global services.
- 3.23 Eircom, also provided its own observations in relation to key trends identified by ComReg. In particular, Eircom agreed that the migration towards Ethernet LLs; increased demand for wireless services; cloud computing and data centre consolidation; and increased demand from the public sector were important developments that affected the provision of retail LL. However, Eircom was of the view that ComReg overestimated the importance of TI LLs and queried whether the 2014 Market Research results highlighting the take up of LL services¹¹⁴ were reliable.
- 3.24 In expressing its views on ComReg's assessment of the main trends and developments in the provision of retail LLs, BT made observations on the adequacy of the LL definition employed by Oxera in its report¹¹⁵; the ability of standalone LL purchasers to replicate the functionality of other services sold with LLs; the role of dark fibre; the importance of Enet; and the role of NGA and broadband.

Quality of information obtained via SIRs

- 3.25 BT noted that market analysis in the 2008 Decision was conducted in a substantially different way compared to the market analysis in the 2016 Consultation. It also stated that ComReg has not provided sufficient notice to SPs in relation to the type of information to be requested via SIRs. Therefore, BT expressed its concern that the overall quality of information presented in the 2016 Consultation may not be very high given that SPs were not required to store data in a format requested by ComReg since the 2008 Decision.

¹¹⁴ The 2014 Market Research, slide 17.

¹¹⁵ See "WHQA market definition and analysis in Ireland, [ComReg Document 16/69a](#), 18 August 2016", ('Oxera report').

3.26 Verizon considered that evidence presented in ComReg's assessment of competitive conditions in Section 5 of the 2016 Consultation might not be correct given difficulties experienced by ComReg in gathering information from SPs and highlighted in Appendix 3 of the 2016 Consultation.

3.2.2 Respondents' views on the Retail Market Assessment

3.27 8 out of the 12 Respondents expressed views on likely scope of the market for the provision of retail LLs.

3.28 ALTO, Eircom, HEAnet and Vodafone, generally agreed with ComReg's analysis, but in some cases disagreed with specific parts of the analysis.

3.29 Airspeed, BT, Enet and Verizon disagreed with parts of ComReg's analysis.

3.30 ComReg has summarised the Respondents' views below, grouping the key issues raised into the identified themes, namely:

- (a) Whether the proposed retail LL product markets should include business broadband services (discussed in paragraphs 3.31 to 3.32 below);
- (b) The treatment of dark fibre services (discussed in paragraphs 3.33 to 3.35 below);
- (c) Whether wireless LLs should be excluded from the proposed retail product markets (discussed in paragraphs 3.36 to 3.39 below);
- (d) Whether subnational geographic retail markets exist (discussed in paragraphs 3.40 to 3.44 below);
- (e) Difficulties in expressing views due to the redaction of text (discussed in paragraph 3.45 below); and
- (f) Other issues (discussed in paragraph 3.46 below).

Whether the proposed retail product markets should include business broadband services

3.31 Verizon and Eircom considered that business broadband services should be included in the proposed retail product markets. Both Respondents noted the advancements in broadband technology and relatively lower prices of broadband services when compared to prices of LLs. Therefore, Eircom and Verizon argued that SMEs, as well as organisations with multiple sites, consider broadband services as a viable substitute for LLs.

3.32 Enet agreed that broadband and LLs reside in separate product markets.

The treatment of dark fibre services

- 3.33 BT noted ComReg’s preliminary view that dark fibre services are outside the scope of retail LL product markets. However, BT stated that this preliminary view should not form the basis for ComReg’s approach to the treatment of dark fibre services at the wholesale level and, in particular, ComReg’s proposal to attribute sales of active WHQA products provided using rented dark fibre to SPs supplying these WHQA products rather than to the suppliers of such dark fibre services.
- 3.34 BT also disagreed with Oxera’s view on the relevance of the EU Broadband Cost Reduction Directive (**BCRD**)¹¹⁶ to the provision of WHQA services. In this regard, BT noted that there are instances where unrestricted access to passive infrastructure, such as ducts and trenches, can act as competitive constraint on providers of WHQA services and therefore, the BCRD is of relevance to ComReg’s review of WHQA market(s).
- 3.35 Eircom noted that while dark fibre services might not be an effective substitute to active LLs at the retail level, these products are substitutes at the wholesale level as SPs may prefer to rent existing dark fibre from third parties when considering network extensions rather than rolling out their own fibre network.

Whether wireless LLs should be excluded from the proposed retail product markets

- 3.36 Airspeed, ALTO, Enet and Vodafone disagreed that wireless LLs are, from an end user perspective, an effective substitute to wired LLs. Airspeed noted that many retail end-users explicitly request fibre based services, thereby ruling out wireless LLs.
- 3.37 ALTO and Vodafone were of the view that wireless LLs are outside the scope of the proposed retail markets due to:
- (a) Differences in intended use by retail end-users;
 - (b) Lower service levels; and
 - (c) Higher prices.

¹¹⁶ European Commission (2014), '[DIRECTIVE 2014/61/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks](#)', Directive, 23 May (**BCRD**).

- 3.38 Enet argued that ComReg attached too much weight to HEAnet's purchasing decisions to use wireless LLs and noted that many retail end-users explicitly request fibre based services. Enet also pointed out that ComReg's analysis did not take into account the technical drawbacks of wireless LLs such as [redacted]. In Enet's view, these factors merit the exclusion of wireless LLs from the proposed retail product markets.
- 3.39 BT and Eircom agreed that wireless LLs are in the same retail product market as wired LLs. Eircom noted the reduced cost of wireless Ethernet technology and argued that wireless LL services have been deployed nationwide to provide both retail and wholesale services.

Whether subnational geographic retail markets exist

- 3.40 BT, HEAnet and Verizon were of the view that competitive conditions are not uniform across the State and, therefore, disagreed that national geographic markets were appropriate. In particular, HEAnet noted that outside of the main cities and business parks there is a lack of competition in the provision of retail high bandwidth (>300Mb/s) MI circuits. HEAnet also highlighted the high dependency by Access Seekers on Eircom's WHQA products in these areas.
- 3.41 BT considered that there are significant variations in competitive conditions in Ireland. It noted that potential removal of regulatory obligations in the MI WHQA Market would seriously impact Access Seekers' ability to supply retail LL services, particularly in areas outside of business parks and more densely populated areas. In this regard, BT expressed its concern with regard to SPs' ability to access MI WHQA products provided over Eircom's ubiquitous network, absent regulation, and referred to Eircom's restrictions on the use of LLs in its ducts¹¹⁷. BT queried how these restrictions would be addressed by ComReg if regulatory obligations were lifted from Eircom in the MI WHQA Market.

¹¹⁷ In January 2017, Eircom amended its [Access Reference Offer](#) ('ARO') and removed the restrictions on access to Eircom's ducts and poles. In particular, Eircom removed 'fixed broadband services only' restriction which specified that Access Seekers can use Eircom's ducts and poles for the purposes of offering fixed broadband services only.

- 3.42 Verizon noted that ComReg's analysis highlighted network roll-outs in urban areas and business parks as well as product differences in retail LL services purchased inside of Business Parks. In its view this evidence pointed to clear differences between competitive conditions in major urban centres and competitive conditions in other geographic areas. Verizon stated that its view was supported by other SPs referring to SPs views presented in the 2016 Consultation¹¹⁸.
- 3.43 Verizon also questioned ComReg's referral to Eircom's national ubiquitous copper network as the primary reason for ComReg's preliminary view that retail TI LL markets are national in scope.
- 3.44 Finally, Verizon expressed its concern with regard to SPs' ability to access Eircom's wholesale MI LLs in absence of regulation in the MI WHQA Market.

Difficulties in expressing views due to the redaction of text

- 3.45 ALTO, BT, Enet and Vodafone commented on ComReg's practice of redacting commercially sensitive/confidential information in the Consultation. While appreciating the need to do so, these Respondents noted that such redactions made it difficult for Respondents to comment on such text and, therefore, impacted their ability to respond in detail to the issues raised.

Other issues

- 3.46 BT, in addition to providing comments on ComReg's approach to the assessment of retail market, also provided comments on particular aspects of ComReg's analysis such as:
- (a) an excessive reliance had been placed on technical characteristics when assessing substitutability of various products;
 - (b) the identification of technologically specific product (Ethernet product) as a retail LL focal product;
 - (c) the importance of bespoke pricing and tendering in the retail LL market(s); and
 - (d) the switching costs when migrating from TI to MI based LLs had been overestimated.

¹¹⁸ See paragraph 4.236 of the 2016 Consultation.

3.3 ComReg's Assessment of Respondents' Views

3.47 In paragraphs 3.10 to 3.46 above, ComReg has summarised the key issues raised by Respondents in relation to ComReg's preliminary assessment of recent trends/developments in the retail LL markets, along with views expressed on ComReg's its preliminary assessment of the likely scope of the retail market for the provision of LLs.

3.48 Below ComReg considers Respondents' views on:

- (a) the Retail Trends and Developments (discussed in paragraphs 3.49 to 3.98 below); and
- (b) the Retail Market Assessment (discussed in paragraphs 3.99 to 3.176 below)

3.3.1 Assessment of Respondents' views on Key Retail Trends and Developments

3.49 Below, ComReg assesses Respondents' views under each of the key themes identified in paragraph 3.13 above, in particular:

- (a) The availability of fibre infrastructure has been overestimated (see paragraphs 3.53 to 3.62 below);
- (b) A failure to recognise the importance of multi-site retail LL customers (see paragraphs 3.63 to 3.77 below);
- (c) Other key developments affecting the provision of retail LL have not been adequately taken into account (see paragraphs 3.78 to 3.96 below); and
- (d) The quality of information obtained via SIRs (see paragraphs 3.97 and 3.98 below).

3.50 Prior to doing so, having refreshed a variety of information sources, ComReg notes that it has updated its analysis of the trends and main developments originally presented in section 3 of the Consultation, with this analysis set out in Appendix: 6 of this Further Consultation ('**Updated Trends**'). This Updated Trends analysis also informs ComReg's preliminary positions as set out throughout this Further Consultation.

3.51 In general, the Updated Trends analysis shows no major changes to those trends/developments identified in the 2016 Consultation, such that they would, save for the exclusion of wireless P2P LLs (discussed in paragraphs 3.118 to 3.155 below) lead ComReg to materially alter its preliminary views set out in the 2016 Consultation and now set out in this Further Consultation.¹¹⁹ As noted in the Updated Retail Trends Analysis, ComReg highlights the following developments since the publication of the 2016 Consultation:

- (a) Migration from TI to MI based LL services (or cessation of TI LL services) has continued during 2016, but at an accelerated rate. In the 12 months to December 2016, the rate of annual decline in the uptake of retail TI LLs was 20.1% compared to 6% in the same period one year ago. In nominal terms, the overall number of retail TI LLs decreased by 1,083 lines in the 12 months to December 2016 compared to 345 lines in the same period one year ago. The demand for retail wired MI LLs, however, has continued to grow with 9,521 wired MI LLs in-situ at the end of 2016 compared to 8,138 wired MI LLs at the end of 2015 (annual growth rate of 16%).;
- (b) Eircom's market share in terms of all fixed network retail LLs (TI and MI) has continued to decline with Eircom having [\leq [REDACTED]]¹²⁰ of all wired retail LLs at the end of 2016 compared to [\leq [REDACTED]]¹²¹ at the end of 2015 (a decline of [\leq [REDACTED]]); and
- (c) The rate of growth in the uptake of wireless LLs has plateaued as the demand for wireless LLs has marginally decreased with 2,651 wireless LLs (accounting for 16.1% of all retail LL) in-situ at the end of 2016 compared to 2,775 wireless LLs (accounting for 17% of all retail LLs) sold at the end of 2015. The growth in the overall number of P2P radio links licences issued by ComReg to all entities operating wireless links¹²² has also flattened. There were 12,287 live P2P radio links licences as of Q3 2017 compared to 12,227 in Q2 2015 (an increase of 0.5%).

¹¹⁹ However, ComReg has considered its thinking in relation to the substitutability of P2P wireless links and HQA provided over wired connections. However, this change is not based on the retail market trends update, but rather on the further information given by multi-site retail purchasers of LLs and suppliers of retail LLs.

¹²⁰ Less than 40%.

¹²¹ Less than 40%.

¹²² The number of P2P radio licences is not correlated with the number of wireless based retail LL. This is because each licence represents one hop (or link) in a connection. Furthermore, P2P radio licences can be used for other services such as mobile backhaul, wholesale LLs and resilience purposes and used by other entities (other than LL SPs) such as Local Authorities, Emergency Services, etc.

3.52 ComReg considers below the issues raised by Respondents, having regard to the Updated Retail Trends Analysis.

The availability of fibre infrastructure has been overestimated

3.53 ComReg has considered Respondents' views as summarised in paragraphs 3.14 to 3.17 above.

3.54 ComReg does not agree that the availability of fibre infrastructure to support wired MI WHQA was overestimated in the 2016 Consultation. In the 2016 Consultation ComReg undertook a detailed analysis of the availability of infrastructure, noting that several SPs have quasi-national fibre network infrastructure by utilising duct and/or dark fibre to connect customer sites using Enet's MANs as well as listing the main network deployments that have taken place since the 2008 Decision¹²³.

3.55 In order to further examine the geographic presence of alternative fibre networks, ComReg employed TERA/Geocible to overlay maps of SPs' networks (details of which were submitted by SPs in response to the 2017 Statutory Information Requests) onto a map of Ireland divided into Local Government Areas ('LGAs')¹²⁴ and, separately, Census 2011 Small Areas ('SAs')¹²⁵ as defined by CSO. TERA/Geocible then estimated the percentage of SAs and LGAs that were crossed by each SP's network. It should be noted that a significant number of SAs contain no business or non-residential premises and thus, this exercise should not be interpreted as a network reach analysis, but rather as measurement of alternative networks' geographic spread.

3.56 Table 1 below indicates SPs' network presence in terms of SAs and LGAs'. It highlights that SPs such as Enet, BT and Virgin Media have network presence in more than 75% of LGAs and 15% of SAs that are geographically dispersed throughout Ireland. While network reach of these SPs in terms of non-residential premises is not uniform within SAs, ComReg remains of the view that BT, Enet and Virgin Media have networks present in every province in Ireland. However, this does not mean that SPs have replicated the ubiquity of Eircom's network which, as explained in more detail in Section 5 below, gives Eircom a significant advantage over its competitors in terms of economies of scale.

¹²³ See paragraphs 3.51 to 3.67 of the 2016 Consultation.

¹²⁴ As set out in Local Government Act 2001 (No. 37 of 2001).

¹²⁵ See <http://www.cso.ie/en/census/census2011boundaryfiles/> for definition of Small Areas.

Table 1: Presence of alternative fibre networks [REDACTED]

SPs that deployed own fibre network infrastructure	Geographic presence in terms of SAs	Geographic presence in terms of LGAs
Aurora	[REDACTED]	[REDACTED]
BT	[REDACTED]	[REDACTED]
Colt	[REDACTED]	[REDACTED]
Digiweb/Viatel	[REDACTED]	[REDACTED]
Enet	[REDACTED]	[REDACTED]
ESB	[REDACTED]	[REDACTED]
EU Networks	[REDACTED]	[REDACTED]
GTT	[REDACTED]	[REDACTED]
Magnet	[REDACTED]	[REDACTED]
SIRO	[REDACTED]	[REDACTED]
Verizon	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]

3.57 ComReg cannot dispute the fact that any of the SPs listed above have not replicated Eircom's ubiquitous access network, but notes that alternative fibre networks have been deployed nationwide, particularly in areas of high demand for LL services such as Business Parks. This was demonstrated in Appendix 5 of the 2016 Consultation where the list of Business Parks having access to three or more competing SP fibre network infrastructures (and that are able to provide MI WHQA services to Access Seekers) was presented. Therefore, ComReg remains of the view set out in the 2016 Consultation that several SPs have quasi-national own fibre network coverage in Ireland.

3.58 ComReg disagrees with Vodafone's view summarised in paragraph 3.15 above that the lack of published network maps has led to underestimation of SPs' reliance on Eircom's network. In the 2016 Consultation, ComReg set out what network maps were used as evidence in forming ComReg preliminary views¹²⁶, but redacted these maps for confidentiality reasons. Instead, ComReg considered that the list of Business Parks set out in the Appendix 5 of the 2016 Consultation has presented geographic areas where there are several fibre infrastructures capable of offering wholesale and/or retail LLs.

¹²⁶ See Appendix 11 of the 2016 Consultation.

3.59 Furthermore, ComReg notes that maps of alternative networks in themselves would not necessarily indicate the extent of Access Seekers' reliance on Eircom's network, as alternative networks have not been deployed in less densely populated areas (or areas of less building density) where there is more limited or no demand for LLs relative to other areas. Instead, in the 2016 Consultation ComReg measured Access Seekers' reliance on Eircom's network in terms of their purchases of Eircom's WHQA services when providing retail and/or wholesale LL services. In this regard, it was noted that only [redacted]¹²⁷ of all retail MI LL services (including wireless leased lines) provided by Eircom's competitors depended on wholesale inputs from Eircom at the end of 2015. In the wholesale market, the corresponding figure is [redacted]¹²⁸. When wireless leased lines are removed these are adjusted to [redacted]¹²⁹ and [redacted]¹³⁰ respectively. The latest information for wired leased lines indicates that by the end of 2016 Access Seekers' reliance on Eircom has slightly decreased with [redacted]¹³¹ of retail MI LL services provided by Eircom's competitors depending on wholesale inputs from Eircom. In the wholesale market the corresponding figure has increased to [redacted]¹³². In ComReg's preliminary view, this evidence suggested that in areas of high LL demand Access Seekers' can provide retail and/or wholesale MI LLs by either self-supply or purchase of MI WHQA products from suppliers other than Eircom, although we recognise that this may not always be possible in every circumstance. However, as discussed further below, ComReg has updated its preliminary view on Access Seekers' dependency on Eircom's WHQA products in light of additional evidence that suggests Access Seekers are particularly reliant on Eircom's WHQA products, when competing for multi-site customers bids given that for some sites Eircom is the only viable supplier.

¹²⁷ Less than 20%.

¹²⁸ Less than 10%.

¹²⁹ Less than 20%.

¹³⁰ Less than 10%.

¹³¹ Less than 20%.

¹³² Less than 10%.

- 3.60 ComReg agrees with HEAnet's observation that Eircom and Enet have the largest fibre networks in terms of geographic coverage, but notes that other SPs are utilising duct and/or dark fibre to extend their own networks and connect customer sites using Enet's MANs. This is supported by evidence presented in Table 1 above where coverage of BT's, Virgin Media's, Vodafone's and other SPs' networks is presented. Thus, ComReg does not agree that outside of large city centres and business parks there is only Eircom's and Enet's fibre infrastructure available.
- 3.61 In relation to Enet's view that Eircom is the sole option for WHQA products not only in remote locations, but also in parts of Dublin and other urban areas, ComReg notes that in the 2016 Consultation it set out its preliminary view. This was that in areas where alternative wired network infrastructure was not present, SPs of wireless LLs were proving a competitive constraint on Eircom (and other SPs) as wired and wireless LLs were considered to be within the same retail LL product market. However, as discussed in more detail below, ComReg's preliminary view on the level of substitutability between wired and wireless LLs has been updated since the 2016 Consultation and these products are no longer considered by ComReg to be within the same retail LL product market.
- 3.62 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that the reach and availability of alternative fibre networks was not overestimated in the 2016 Consultation. However, as discussed in more detail below¹³³, ComReg has updated its preliminary view on Access Seekers' reliance on Eircom's WHQA products, particularly when competing for multi-site retail LL customers' contracts.

Failure to recognise the importance of multi-site retail LL customers

- 3.63 ComReg notes the views expressed by Respondents' as summarised in paragraphs 3.18 to 3.21 above concerning the importance of multi-site retail LL customers and SPs' reliance on Eircom's WHQA inputs for providing retail LLs to such customers.
- 3.64 In order to assess Respondents' views on this issue, ComReg has analysed the profile of retail LL customers using information obtained via SIRs. Figure 4 sets out ComReg's approach and assumptions made when compiling a list of retail customers purchasing LLs in Q2 2016. This detailed analysis was completed on Q2 2016 data in advance of obtaining data for 2016 calendar year.

¹³³ See paragraphs 3.67 to 3.77 of this Further Consultation.

Figure 4: Methodology and assumptions applied in ComReg's analysis of retail LL purchasers

- (a) All Q2 2016 retail on-net and off-net circuit lists from each SP were merged into a single list combining information on customer names, types of LL products purchased, etc.
- (b) A list of 3,128 individual customers purchasing LL services was generated by inspecting customer names provided by SPs.
- (c) ComReg then applied the following labels to each customer by examining their profile and LL purchases:
 - 1. Whether a customer is from a Private or Public Sector organisation;
 - 2. Whether a customer is a single-site or multi-site customer (a multi-site customer is assumed to be a customer with at least three different premises addresses);
 - 3. Whether a customer has one or several suppliers of LLs;
 - 4. Whether a customer purchased fixed, wireless or both types of LLs;
 - 5. The number of purchased wireless LLs as a percentage proportion of all purchased LLs (logical circuits were excluded in this analysis as these circuits would dilute the percentage share of wireless LLs given that logical circuits are mostly provided over wired LLs and recorded mainly by BT and Eircom);
 - 6. Whether LLs purchased by customers are based on Eircom's network inputs either at the retail (retail LL(s) are purchased directly from Eircom) or wholesale level (retail LL(s) purchased from SP that use Eircom's WHQA inputs to provide these LL(s));
 - 7. The number of purchased LLs that are dependent on Eircom's network inputs as a percentage proportion of all purchased LLs (logical circuits are excluded); and
 - 8. Whether all of purchased LLs that are dependent on Eircom's network are TI LLs or MI LLs.
- (d) A range of cross-tabulations was made to identify LL customers' purchasing decisions and Access Seekers' dependency on Eircom's network when providing retail LL services to end-users.

- 3.65 In addition, using this LL customer information, ComReg compiled a sample list of multi-site retail LL customers, with ComReg then having met with them to obtain their views on a range of issues, including those raised by Respondents. Appendix: 4 of this Further Consultation sets out a summary of responses obtained from interview participants. This evidence is referred to in this Section 3 and elsewhere throughout this Further Consultation (referred to as the '**Interviews with end-users of LLs**').
- 3.66 Table 2 presents summary statistics based on the generated list of 3,128 retail LL customers at the end of Q2 2016¹³⁴. It indicates that while there are relatively few retail LL customers labelled as multi-site customers (18.86% of all retail LL customers), these customers purchase the majority of retail LLs (73.7% of all (TI and/or MI retail LLs)). In terms of revenue generated from retail LL sales, revenue from sales to multi-site customers' accounts for approximately 73% of all the revenue generated from retail LL customers. It is, evident that multi-site retail LL customers, therefore, play an important role in the retail LL market having regard to the high share in volume and revenue terms and ComReg has taken this into consideration throughout the analysis set out in this Further Consultation.

Table 2: Profile end-users purchasing LLs at the end of Q2 2016¹³⁵

Profile of end-users purchasing retail TI and/or MI LLs at the end of Q2 2016	Frequency	Percent
Number of single-site retail LL customers	2,538	81.14%
Number of multi-site retail LL customers	590	18.86%
Total	3,128	100%
Number of circuits purchased by single-site retail LL customers	4,305	26.27%
Number of circuits purchased by multi-site retail LL customers	12,083	73.73%
Total	16,388	100%

¹³⁴ This is the total number of LL customers at the end of Q2 2016 irrespective of whether they purchase MI or TI LLs.

¹³⁵ As multi-site retail LL customers use both TI and MI LLs – albeit for different purposes – the markets have not being delineated by interface for this table.

- 3.67 ComReg has also considered Respondents' assertions that SPs are highly reliant on Eircom's WHQA inputs when providing retail LLs to multi-site customers. In this regard, ComReg notes that based on the generated list of LL customers, SPs (excluding Eircom) provided retail MI LLs to 490 of the 590 multi-site customers¹³⁶. Table 3 shows that SPs were reliant on Eircom's MI WHQA inputs when supplying retail services to 208 (43%) of these multi-site customers¹³⁷.

Table 3: SPs' dependency on Eircom's MI WHQA inputs when providing retail MI LLs to multi-site customers

Number of multi-site customers purchasing MI LLs from SPs other than Eircom	Frequency	Percent
Number of multi-site retail LL customers supplied with MI LLs without reliance on Eircom's MI WHQA inputs	282	57.35%
Number of multi-site retail LL customers supplied with MI LLs using Eircom's MI WHQA inputs	208	42.65%
Total	490	100%

- 3.68 ComReg notes that SPs' dependency on Eircom's MI WHQA inputs tend to be relatively higher when they are providing retail LLs to large multi-site customers that have premises located outside of towns having an Enet MAN. In this regard, Table 4 presents a sample of large multi-site retail LL customers and their SPs of retail LL services. It also lists SPs of wholesale LLs used for providing retail services to these customers. Table 4 indicates that Access Seekers providing services to multi-site retail LL customers such as, for example (BT and Vodafone), tend to use a mix of on-net and off-net¹³⁸ LLs. It also shows that Access Seekers are reliant (to a certain extent) on Eircom's WHQA inputs when providing retail LL services to these customers.

¹³⁶ The remaining Multi-site customers 17% were purchasing MI services solely from Eircom, or purchasing TI LLs only from SPs other than Eircom.

¹³⁷ It should be noted that SPs' reliance on Eircom's MI WHQA products was relatively low (less than 20%) when providing retail LLs to 72 out of 208 multi-site customers (34%). This means that in total, SPs were relatively highly reliant on Eircom's MI WHQA inputs when providing retail MI LLs to 136 out of 490 multi-site customers (27.8%).

¹³⁸ Throughout this Further Consultation ('off-net') term refers to a situation where the access portion of LL was purchased from a third party LL supplier).

Table 4: A sample of multi-site retail LL customers somewhat dependent on Eircom's wholesale inputs [REDACTED]

Customer	Retail SP	LL circuits and market share	Wholesale SP	LL circuits and market share
[REDACTED] ¹³⁹	[REDACTED]	25 (58.1%)	[REDACTED]	17 (39.5%)
	[REDACTED]	16 (37.2%)	[REDACTED]	16 (37.2%)
	[REDACTED]	2 (4.7%)	[REDACTED]	2 (4.7%)
			[REDACTED]	8 (18.6%)
	Total	43		43
[REDACTED] ¹⁴⁰	[REDACTED]	1 (0.3%)	[REDACTED]	139 (38.8%)
	[REDACTED]	353 (98.6%)	[REDACTED]	173 (48.3%)
	[REDACTED]	1 (0.3%)	[REDACTED]	1 (0.3%)
	[REDACTED]	3 (0.8%)	[REDACTED]	45 (12.6%)
	Total	358		358
[REDACTED] ¹⁴¹	[REDACTED]	129 (97.7%)	[REDACTED]	94 (71.2%)
	[REDACTED]	3 (2.3%)	[REDACTED]	36 (27.3%)
			[REDACTED]	2 (1.5%)
	Total	132		132
[REDACTED] ¹⁴²	[REDACTED]	81 (95.3%)	[REDACTED]	25 (29.4%)
	[REDACTED]	4 (4.7%)	[REDACTED]	60 (70.6%)
	Total	85		85
[REDACTED] ¹⁴³	[REDACTED]	22 (95.7%)	[REDACTED]	16 (69.6%)
	[REDACTED]	1 (4.3%)	[REDACTED]	1 (4.3%)
			[REDACTED]	6 (26.1%)
	Total	23		23

¹³⁹ Purchases over 40 retail LLs with 19% of those supplied by Eircom at the wholesale level.

¹⁴⁰ Purchases over 350 retail LLs with 39% of those supplied by Eircom at the wholesale level.

¹⁴¹ Purchases approx. 100 retail LLs with 27% of those supplied by Eircom at the wholesale level

¹⁴² Purchases 85 retail LLs with 71% of those supplied by Eircom at the wholesale level

¹⁴³ Purchases over 20 retail LLs with 26% of those supplied by Eircom at the wholesale level

- 3.69 Furthermore, ComReg considers that in order to compete for large Multi-site retail LL customers currently served using Eircom's WHQA services, including [REDACTED], Eircom's competitors, in all likelihood, would require access to Eircom's WHQA inputs when preparing their bids, given the geographic spread of these customers' premises and the lack of available alternatives for some of such sites.
- 3.70 Thus, in ComReg's preliminary view, the evidence above suggests that Multi-site retail LL customers have a relatively high dependency on Eircom's WHQA products, particularly when multi-site customers' premises are located outside of Business Parks and in towns where Enet's MANs are not present. For example, some of the largest multi-site customers of LLs are banks and large retail grocery multiples. These customers have a widely dispersed network of sites that are typically located outside of Business Parks¹⁴⁴.
- 3.71 In addition, as discussed in more detail in paragraphs 3.117 to 3.153 below, the majority of multi-site retail LL customers tend to have a strong preference for wired LLs and would not consider wireless LLs as an option for their primary data connectivity services. This evidence also suggests that if Access Seekers wanted to provide retail LLs to such customers they would have to rely on Eircom's WHQA products in areas where no alternative wired infrastructure exists.
- 3.72 SPs' dependency on Eircom's WHQA products when providing services to multi-site retail LL customers is also evident from ComReg's Interviews with end-users of LLs. As noted in Appendix: 4, 6 out of 8 interviewees who were aware when their SP was relying on third party inputs to provide retail LLs to their premises, stated that their SP is relying on Eircom's WHQA products to connect at least some of their customer premises¹⁴⁵.

¹⁴⁴ See Appendix 5 of the 2016 Consultation for the list of Business Parks connected to three or more competing SP wired infrastructures (and that are able to provide MI WHQA services to Access Seekers. As noted in the 2016 Consultation, these Business Parks were chosen as they meet the criterion set out in paragraph 2.22 of the 2012 Price Control Decision, whereby Eircom can seek relief from the margins squeeze obligation laid out therein.

¹⁴⁵ One interviewee was not aware whether its SP is relying on third party networks to deliver retail LLs to its premises. The remaining 8 interviewees had [REDACTED] as their retail LL SP.

- 3.73 It is also important to note that the majority of multi-site retail LL customers have a preference for and in practice contract with a single supplier for primary data connectivity services¹⁴⁶. As noted in Appendix: 4, 12 out of 17 interviewees have a single SP for primary data connectivity services to all of their sites (including international sites)¹⁴⁷. 9 of these 12 interviewees having a single supplier of primary data connectivity services noted that they chose to purchase services from a single supplier, because it is easier to manage one rather than several suppliers (for example when dealing with service faults)¹⁴⁸. One interviewee was of the view that having several SPs of LLs would diminish their bargaining position vis-à-vis SPs when seeking contract renewal.
- 3.74 As highlighted in Appendix: 4, the majority of interviewed multi-site retail LL customers purchase secondary connections for back-up/resilience purposes and, to this end, they tend to have different suppliers for primary/secondary data connections¹⁴⁹ (as it gives them greater security having a separate supplier). Nevertheless, available information indicates that some large multi-site retail LL customers such as banks and retail groceries have one retail supplier providing over 90% of all of their purchased LLs and, thus, it can be assumed that these customers have one supplier providing primary data connectivity services to all of their premises.

¹⁴⁶ Throughout this Further Consultation primary data connectivity service is considered to be a retail LL service used for the majority of time as opposed to secondary data connectivity service which is used as a backup service at times when there are faults with primary LL.

¹⁴⁷ The remaining 5 interviewees noted that they have 2 or more SPs providing primary data connectivity services. In addition, 2 of these 5 interviewees noted that they separate their customer premises into individual lots as no single SPs could deliver retail LLs to all of their premises.

¹⁴⁸ See Table 5 in Appendix: 4 of this Further Consultation.

¹⁴⁹ SPs typically would seek to purchase secondary connections from SPs that use alternative infrastructure (infrastructure that is not used to provide primary data connectivity service) in order to avoid service outages when faults with primary data connectivity services occur.

- 3.75 Multi-site customers' preference to purchase primary data connectivity services to all of their premises from a single SP is, in ComReg's view, an important factor, which impacts the dynamics of the retail LL markets (and upstream WHQA markets as a consequence). In the absence of any regulation in the MI WHQA Market, the ubiquity of Eircom's network is likely to give it an advantage over its competitors whose networks are more localised. In particular, Access Seekers' abilities to compete with Eircom for multi-site retail LL customers' contracts is likely to be hindered, as they would not likely be in a position to provide data connectivity to some customers' sites thereby limiting their ability to fulfil these contracts overall. This is further exacerbated by the multi-site retail LL customers' preference for having a single supplier.
- 3.76 Thus, the additional evidence noted in paragraphs 3.64 to 3.65 above and examined by ComReg supports Respondents' views that SPs' dependency on Eircom's WHQA products is an important factor, particularly when competing for multi-site retail LL customers' contracts. The implications of this evidence are discussed and considered in more detail in Section 4.4.1 of this Further Consultation.
- 3.77 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that multi-site retail LL customers play an important role in the retail LL market. ComReg is also of preliminary view that Access Seekers' are, to a certain degree, reliant on Eircom's WHQA services when providing LLs to multi-site retail LL customers. This is particularly the case in instances where premises of these customers are located outside of Business/Commercial Parks or town centres and especially in towns without an Enet publicly owned, open access MAN.

Other key developments affecting the provision of retail LLs have not been adequately taken into account

- 3.78 ComReg notes comments expressed by Eircom and BT in paragraphs 3.22 to 3.24 above regarding the role of broadband access technologies since the last market review.

- 3.79 In the 2016 Consultation, ComReg acknowledged the deployment of fibre networks by Eircom, Virgin Media and SIRO¹⁵⁰ and took this into consideration when assessing the substitutability between retail LL and broadband services¹⁵¹. As discussed in more detail in paragraphs 3.100 and 3.109 below, ComReg remains of the view that business broadband services are unlikely to be a sufficiently effective substitute for retail LLs such that it would fall within the same product market. ComReg disagrees with Eircom's assertion that Sky is a significant provider of broadband services in the retail SME market as Sky's broadband packages are oriented towards residential customers¹⁵² and Sky does not offer LL services.
- 3.80 In relation to issues raised by Eircom and BT concerning provision of dark fibre services (noted in paragraphs 3.22 to 3.24 above), ComReg noted in the 2016 Consultation¹⁵³ that there are several providers supplying dark fibre at both the retail and wholesale level in Ireland. However, SPs typically purchase dark fibre as an input to provide active LL services rather than sell it directly to retail end-users. Hence, as discussed in more detail in paragraphs 3.110 and 3.116 below, ComReg remains of the view that dark fibre is unlikely to be a sufficiently effective substitute for retail LLs such that it would fall within the same product market.
- 3.81 It should also be noted that having regard to MGA approach¹⁵⁴, sales of WHQA products using third parties' dark fibre inputs were included in ComReg's market share analysis and treated in the same manner as WHQA products sold using own passive access network infrastructure¹⁵⁵. Therefore, in ComReg's view, the availability of dark fibre services was adequately and appropriately considered in the 2016 Consultation.

¹⁵⁰ See paragraphs 3.52 to 3.55 of the 2016 Consultation.

¹⁵¹ See paragraphs 4.9 to 4.57 of the 2016 Consultation.

¹⁵² See <http://www.sky.com/ireland/broadband-talk/> accessed on 27 April 2017.

¹⁵³ See paragraph 4.91 of the 2016 Consultation.

¹⁵⁴ See paragraph 1.33 above.

¹⁵⁵ ComReg also applies this approach in this Further Consultation. See paragraph 4.91 of this Further Consultation.

- 3.82 ComReg disagrees with Eircom's comments referred to in paragraph 3.22 above that market consolidation was not duly considered by ComReg in the 2016 Consultation. In the 2016 Consultation, ComReg highlighted recent consolidations that involved providers of LL services¹⁵⁶ and took this factor into account when assessing the strength of Eircom's competitors (including (but not limited to) market share analysis)¹⁵⁷ and Countervailing Buying Power ("CBP")¹⁵⁸.
- 3.83 In relation to Eircom's comment referred to in paragraph 3.22 above that ComReg failed to adequately account for the significance of the multi-national companies that seek global data connectivity services, However, as noted in paragraph A 5.22 of Appendix: 4, ComReg's interviews with multi-site retail LL customers indicated that interviewees requiring data connectivity to international sites (in addition to national sites) stated that generally, SPs with substantial global data connectivity experience are likely to be considered for the contract. These interviews also highlighted the importance of access to Eircom's WHQA products as SPs providing international data connectivity services such as, for example, BT, Verizon, Colt and AT&T who are, to a certain extent, reliant on Eircom to connect their customers' premises in Ireland.
- 3.84 Therefore, while multi-national customers' preferences for global data connectivity providers might have some impact on the ability of SPs without international network to compete for such customers¹⁵⁹, ComReg does not consider that it is likely to have a sufficient effect on competition in retail LL market in Ireland to warrant a change in ComReg's preliminary views.

¹⁵⁶ See paragraphs 3.3 to 3.26 of the 2016 Consultation.

¹⁵⁷ See paragraph 6.110 to 6.130 of the 2016 Consultation.

¹⁵⁸ See paragraphs 6.135 to 6.141 of the 2016 Consultation.

¹⁵⁹ It should be noted that some multi-national customers break out data connectivity requirements for national and international sites into separate contracts as evident from the list of customers purchasing retail LL services from Eircom.

- 3.85 ComReg disagrees with Eircom's comments referred to in paragraph 3.23 above that ComReg has overestimated the importance of TI LL services in the retail LL market. The continuous decline in demand for TI LLs was acknowledged in the 2016 Consultation¹⁶⁰. However, it was noted that at the end of 2015 TI LLs still accounted for 33.8% of all retail LL circuits which, in ComReg's view, constituted a significant part of the retail LL market. The Updated Retail Trends Analysis highlights¹⁶¹ that at the end of 2016 TI LLs accounted for 25% of all retail LLs and thus, they still account for a significant proportion of all LLs purchased by end-users.
- 3.86 The 2014 Market Research also indicated¹⁶² that Digital (i.e. TDM) and Analogue LL were purchased by a significant number of respondents and in particular by corporate companies (≥ 250 employees). For example, 48% of such respondents indicated that they purchase Digital LLs and 27% noted that they purchase Analogue LLs. ComReg does not agree that the inclusion of micro companies' (1-10 employees) significantly impacted the presented averages across all respondents, as only 9% of surveyed micro companies' purchased any type of LL.
- 3.87 Furthermore, as noted in the 2016 Consultation¹⁶³, rather than being definitive, outputs of the 2014 Market Research were considered alongside empirical data/evidence, where available, in particular, alongside information gathered in response to SIRs and data presented in the QKDRs.
- 3.88 ComReg has also examined purchases made by retail LL customers using the generated list of 3,128 retail LL customers at the end of Q2 2016¹⁶⁴. This analysis indicated that approximately 24% of all retail LL customers have still purchased at least one retail TI LL at the end of June 2016. Amongst these customers, 13%¹⁶⁵ purchased 5 or more TI LLs. The observed profile of LL purchasers indicates that TI LLs are used by a diverse range of customers and are not associated with any particular type of companies. Therefore, ComReg remains of the view that TI LLs continue to play an important role in the provision of data connectivity services, although we acknowledge that importance of TI LLs will continue to decline over time.

¹⁶⁰ See paragraphs 3.27 to 3.34 of the 2016 Consultation.

¹⁶¹ See Figure 16 in the Updated Retail Trends Analysis.

¹⁶² The 2014 Market Research, Slide 17.

¹⁶³ See paragraph 1.49 of the 2016 Consultation.

¹⁶⁴ See paragraphs 3.63 to 3.66 of this Further Consultation.

¹⁶⁵ 3% in terms of total number of retail LL customers.

- 3.89 As noted in paragraph 3.24 above, BT expressed concern regarding a possible disconnect between the definitions of a leased line offered in the Oxera Report and by ComReg, in particular the reference to “*dedicated transmission capacity between fixed locations*”¹⁶⁶ within ComReg’s general definition of a LL. It goes on to make what ComReg considers unclear observations regarding buffering and queueing on packet networks and the meaning of “*uncontended*”, “*overbooking*” and “*dedicated capacity*” on networks. BT further notes that various network operators have different network structures that “...*the principal role of leased lines is to enable a company to have a private network with firewall which is separate and secure from any public network...*”¹⁶⁷. BT, however, does not appear to reach any conclusive points on these issues to the extent that it has any impact on ComReg’s analysis.
- 3.90 ComReg notes BT’s comment, referred to in paragraph 3.24 above in relation to standalone LL customers’ ability to replicate the functionality of other services typically sold with LLs from their own resources. While this particular issue was not examined in the 2014 Market Research (as ComReg considered that this was not of sufficient relevance to the assessment of retail LL market) ComReg’s interviews with multi-site retail LL customers indicated that most of interviewees (82%) prefer to purchase data connectivity and voice services separately, rather than replicate voice services using their own resources. However, ComReg acknowledges that more sophisticated end-users of LLs may be in a position to replicate certain retail services such as Software as a Service (‘SaaS’) using their own resources, rather than purchase them from LL SPs. However, such customers would still require to purchase a retail LL (or dark fibre service) from SPs.
- 3.91 Regarding BT’s comments summarised in paragraph 3.24 above on the importance of Enet, these are discussed in more detail in Section 5.5.2 of this Further Consultation¹⁶⁸. For the reasons set out therein, ComReg disagrees with BT’s assertion that ComReg has underestimated Enet’s role in the provision of WHQA services. In fact, ComReg assesses the relative importance of Enet, both as SP of private network infrastructure and as the management services entity (MSE) of the publicly owned MANs in great detail in Section 4.¹⁶⁹

¹⁶⁶ See page 1 of Oxera Report in the 2016 Consultation.

¹⁶⁷ BT Submission, pages 6 and 7.

¹⁶⁸ See paragraphs 5.62 to 5.65 of this Further Consultation.

¹⁶⁹ See paragraphs 4.178 to 4.179 of this Further Consultation.

- 3.92 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that key developments affecting the provision of retail LLs were adequately considered in the 2016 Consultation. These developments are also taken into consideration throughout this Further Consultation.

Quality of information obtained via SIRs

- 3.93 ComReg notes BT's and Verizon's comments in relation to quality of information obtained from SPs via SIRs as summarised in paragraph 3.25 to 3.26 above. BT noted the differences between the 2008 and 2016 SIRs and the difficulty in SPs coping with these changes. The data collection for the 2008 decision included data collected from 2006, over 10 years ago. The deployment of networks and products have changed significantly since this time. For example, there were very few MI LLs in existence at the time of the 2008 Decision, whereas now they constitute the majority of LLs. It is therefore not credible that the 2006-2008 data collection process would be fit for purpose or relevant to the current analysis, other than facilitating some general comparative observations. It should also be noted that the data collection process for the current analysis commenced in December 2014 when a draft SIR was issued to industry for comment and ComReg has considered all the comments submitted by SPs. We nonetheless appreciate the complexity for SPs in providing ComReg with LL information and we have been working with SPs to give greater predictability and stability in the nature and frequency of information being sought. We will continue these efforts and we intend to continue to actively monitor the retail and wholesale LL markets post this market analysis.
- 3.94 In the 2016 Consultation, ComReg considered it important to highlight the difficulties that it encountered in gathering complete and accurate information from SPs via SIRs as it has had an effect on ComReg's ability to conclude the market analysis of the WHQA Market in an effective and timely manner.

- 3.95 ComReg acknowledges the fact that information requested via SIRs was substantially different from information used in the 2008 Decision. ComReg notes that major trends and developments highlighted in the 2016 Consultation such as migration to MI LLs and the now substantially higher availability of fibre and wireless infrastructure meant that ComReg required different and more granular information. This included, but was not limited to, accurate addresses for connected end user premises in order to assess the extent of competition in the Relevant WHQA Markets on geographical bases. ComReg has acknowledged the fact that it might be difficult for SPs to source historic information and thus, SIRs only sought detailed information for each yearly period 2013-2015 and purely summary information for 2009-2012 as opposed to full detailed information for the entire period 2009-2015¹⁷⁰.
- 3.96 ComReg does not agree that SPs were not given sufficient notice for storing information in a format requested via SIRs. Draft questionnaires and accompanying explanatory documentation was sent to SPs well in advance of issuance of SIRs and gave SPs an opportunity to familiarise themselves with the type of data that ComReg sought to gather and to provide their own views. SIRs also gave SPs an adequate period of time to provide the requested information. We do, however, appreciate that retrospective mining of data systems for information can be complex and burdensome.

¹⁷⁰ Time span from the 2008 Decision.

- 3.97 With respect to the quality of information relied upon in the 2016 Consultation, ComReg outlined the steps that it took to ensure that data obtained via SIRs was sufficiently robust¹⁷¹. ComReg specifically engaged the consultancy TERA to review its data collection and treatment processes with TERA's report published alongside the 2016 Consultation¹⁷². It should also be noted that information relied upon in the 2016 Consultation was obtained via three SIRs¹⁷³. These SIRs gathered relatively similar information and SPs became more accustomed to the type of information sought by ComReg. As a result, the number of difficulties associated with gathering complete and accurate information for years 2015 and 2016 were significantly reduced. Overall, ComReg expended considerable effort in working with SPs (including BT and Verizon amongst others) in order to obtain accurate and reliable information¹⁷⁴. Thus, ComReg is confident that it has used all reasonable endeavours to ensure that the information gathered and used in its analysis is sufficiently robust.
- 3.98 ComReg also notes that additional information gathered to inform this Further Consultation and in particular, information obtained via 2017 SIRs was provided in a timely manner and ComReg is confident about the accuracy and robust nature of this information.

Assessment of Respondents' views on the Retail Market Assessment

- 3.99 Below, ComReg assesses Respondents' views under each of the key themes identified in paragraph 3.30 above, in particular:
- (d) Whether the proposed retail product markets should include business broadband services (discussed in paragraphs 3.100 to 3.109 below);
 - (e) The treatment of dark fibre services (discussed in paragraphs 3.110 to 3.117 below);
 - (f) Whether wireless LLs should be included in the proposed retail product markets (discussed in paragraphs 3.118 to 3.155 below);

¹⁷¹ See paragraph 1.45 of the 2016 Consultation.

¹⁷² See Appendix 6 of the Consultation ('**TERA Report**').

¹⁷³ See paragraph 1.44 of the 2016 Consultation.

¹⁷⁴ As noted in paragraph 1.45 of the 2016 Consultation, ComReg also took non-compliance action against Vodafone for failing to provide the requested information. See "[ComReg v Vodafone: District Court Hearing on Failure to Provide Information to ComReg, ComReg Document 15/101](#)", dated 08 September 2015.

- (g) Whether subnational geographic retail markets exist (discussed in paragraphs 3.156 to 3.167 below);
- (h) Difficulties in expressing views due to the redaction of text (discussed in paragraphs 3.168 to 3.171 below); and
- (i) Other issues (discussed in paragraphs 3.173 to 3.176 below).

Whether the proposed retail product markets should include business broadband services

- 3.100 As noted in paragraph 3.31 above, Verizon and Eircom suggested that the scope of retail product market should be broadened and include business broadband services.
- 3.101 ComReg disagrees with Verizon's and Eircom's views. In the 2016 Consultation ComReg acknowledged the increased bandwidth supported by Next Generation Access ('**NGA**') business broadband and the substantial price differences between retail LLs and business broadband services¹⁷⁵. Apart from this, ComReg also noted that there remains substantial differences in those product characteristics that appears to be important to purchasers of LLs including such as symmetrical up/download speed, resilience and low latency/jitter and, importantly, differences in Service Level Agreements ('**SLA**'s).
- 3.102 With respect to Eircom's assertion that many SMEs will find that the parameters of service offered by broadband services are likely to be sufficient to meet their business requirements, ComReg notes that, as highlighted in paragraph 3.66 above, the majority of retail LLs are purchased by large multi-site organisations having complex business data connectivity requirements. This fact is also supported by the 2014 Market Research which indicated that the tendency to purchase LLs increases with the size of the business¹⁷⁶. Thus, while the majority of SMEs might be purchasing broadband services only, ComReg assesses substitution between broadband services and retail LLs from retail LL purchasers' perspective.

¹⁷⁵ See paragraphs 4.55 and 4.56 of the 2016 Consultation.

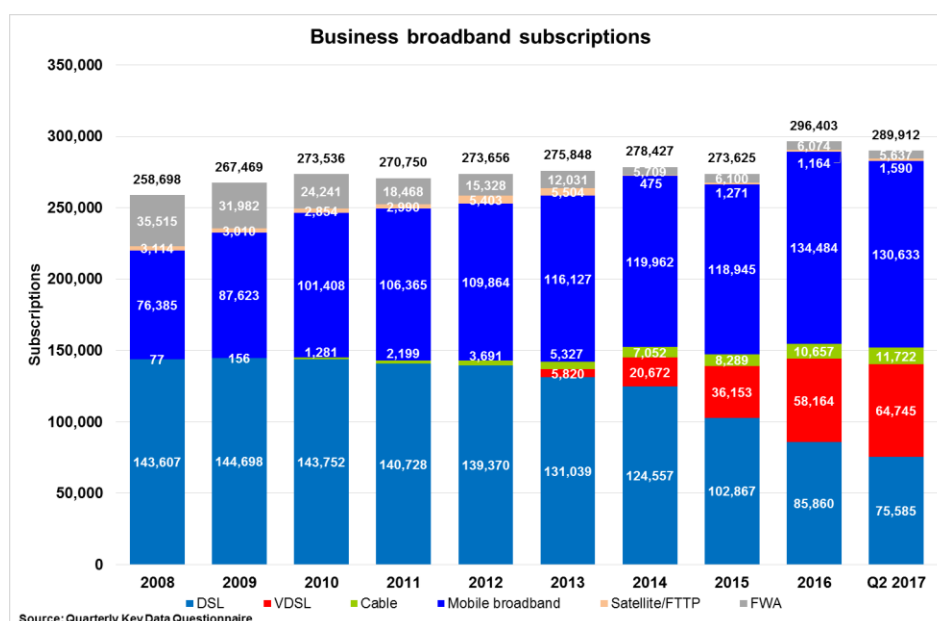
¹⁷⁶ See paragraph 4.37 of the 2016 Consultation.

- 3.103 In this regard, ComReg's interviews with multi-site retail LL customers indicate that broadband services, where they are used, are typically utilised by some customers as a back-up service for resilience purposes (as are 3G and 4G mobile data services). In instances where customer sites are using broadband as a primary service, these sites tend to be smaller less critical sites with lower data connectivity requirements and those located in more remote areas where LL services are not readily available or are considered to be too costly. Thus, ComReg considers that business broadband services, where they are used, are more likely to be used for complimentary purposes alongside LL services rather than act as an effective substitute for retail LLs. This evidence, in ComReg's view suggests that asymmetric broadband services are unlikely to be a substitute for retail MI LLs.
- 3.104 ComReg's view is also supported by the observed take up of business broadband and retail LL services. In this respect Figure 5 below indicates an increased growth in higher bandwidth business broadband services as facilitated by an increasing coverage of NGA networks, with NGA broadband accounting for 27% of all business broadband subscriptions as of Q2 2017. Importantly, growth in the take up by business of NGA broadband appears to have had limited impact on the take-up of LL services, as the number of purchased retail MI LLs has continues to grow¹⁷⁷ with 9,486 fixed MI LLs sold at the end of Q4 2016 compared to 8,139 in 2015. While ComReg notes the accelerated decline for retail TI LLs¹⁷⁸, ComReg is of preliminary view that end-users are replacing legacy TI LL services with MI LLs rather than broadband services.

¹⁷⁷ See Figure 16 in the Updated Retail Trends Analysis.

¹⁷⁸ See paragraph 3.51 above.

Figure 5: Business broadband subscriptions



3.105 As noted in the 2016 Consultation¹⁷⁹, switching barriers such as changes to customer premises equipment and the potential for service disruption when migrating from retail LLs to business broadband services may affect the rate of any switching between these services. While some end-users might decide to switch from retail LLs to broadband services, ComReg does not consider that such switching would be sufficient and merit the inclusion of retail LLs and broadband within the same product market definition. In this regard, ComReg notes that Eircom did not provide evidence suggesting that a substantial number of LL customers are switching to broadband services.

¹⁷⁹ See paragraphs 4.43 and 4.44 of the 2016 Consultation.

- 3.106 ComReg notes Verizon's view summarised in paragraph 3.31 above that some multi-site retail LL customers are increasingly considering business broadband services for various business purposes. While Verizon cited some examples where end-users were considering the use of broadband services instead of LLs, Verizon did not demonstrate that such customers' considerations have actually translated into significant migration from retail LLs to broadband services. In this regard, in paragraph 3.102 above, ComReg noted that the majority of interviewed multi-site LL customers purchase both retail LLs and business broadband services. However, retail LLs are almost always used as the primary means for the provision of WAN¹⁸⁰ connectivity to most of the end user sites. This is likely to include reasons such as retail LLs tending to have superior SLAs relative to broadband services¹⁸¹. In contrast, business broadband services, where also purchased in conjunction with retail LLs, tend to be used as a lower cost back-up solution for resilience purposes and are not generally used for primary or business critical services.
- 3.107 ComReg does not agree that factors such as relatively lower prices of broadband services (compared to prices of retail LLs) and increasing broadband speeds in themselves provide a sufficient incentive for switching from LLs to broadband services, due to substantial differences in other product characteristics (set out in paragraph 3.101 above) which appear to be of importance to purchasers of LLs.
- 3.108 Thus evidence obtained from multi-site LL customers, along with the analysis set out in the 2016 Consultation, would suggest that a HM supplier of retail LL services is likely to be able to sustain a profitable SSNIP in the range of 5-10% above the competitive level, without a sufficient number of customers switching to broadband services.
- 3.109 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that, with the exception of EFM products, business broadband services are unlikely to be a sufficiently effective substitute to retail LLs such that they would fall within the same product market. ComReg does, however, recognise that many SMEs may rely solely on business broadband services to satisfy their data connectivity requirements, but this is not in itself sufficient to put BBS in the same relevant market.

¹⁸⁰ A wide area network ('WAN') is a private network that are present over a number of distinct locations.

¹⁸¹ In this regard, the 2014 Market Research indicated that LL purchasers are more likely to have high quality SLAs when compared to broadband purchasers as well as superior SLA content. See paragraphs 4.22 and 4.33 of the Consultation.

The treatment of dark fibre services

- 3.110 As summarised in paragraphs 3.33 and 3.35 above, BT and Eircom commented in relation to ComReg's treatment of dark fibre services in the 2016 Consultation.
- 3.111 In this regard, ComReg notes that neither respondent explicitly disagreed with ComReg's preliminary view in the 2016 Consultation¹⁸² that dark fibre is unlikely to be an effective substitute such that it would warrant its inclusion in retail LL product market definition. ComReg's interviews with Multi-site LL customers further supports ComReg's view, with only 3 out of 17 interviewees noting that they purchase dark fibre and use it to self-supply data connectivity to sites requiring high bandwidth service¹⁸³. All of these customers are relatively large (in terms of employee numbers) and have sophisticated knowledge of active LL service management. It should also be noted that two of these interviewees stated that the availability of dark fibre services at the retail level is significantly lower compared to availability of retail LLs, thus limiting their ability to switch to dark fibre.
- 3.112 Hence, ComReg remains of the opinion that dark fibre would appear to be suitable for only very large, sophisticated users such as large multinational cloud service providers and Government Networks ('GN')¹⁸⁴ given that it requires the additional inputs (e.g. terminal equipment) and management by end-users.
- 3.113 In relation to Eircom's view that dark fibre is an effective substitute for wholesale LLs, as noted in more detail in paragraphs 4.86 to 4.90 below ComReg remains of the view that a sufficient number of Access Seekers purchasing WHQA products are unlikely to switch to dark fibre in response to a SSNIP in the range of 5-10% above the competitive level such that it would render the price increase unprofitable. Limited dark fibre availability outside of specific areas within large urban centres would also limit Access Seekers' ability to switch from wholesale LLs to dark fibre.

¹⁸² See paragraphs 4.90 to 4.97 of the 2016 Consultation.

¹⁸³ See Table 20 of Appendix: 4.

¹⁸⁴ GN is a private, managed WAN connecting public service agencies via a data, voice and video capable network. GN is designed primarily to facilitate secure and reliable communication between Government agencies and to support existing and future Government applications. Further information available at <http://ictprocurement.gov.ie/government-networks/>.

- 3.114 Furthermore, ComReg disagrees with BT's comments in relation to ComReg's approach to dark fibre treatment. As set out in the 2016 Consultation¹⁸⁵, dark fibre is likely to be outside the scope of the Relevant WHQA Markets and is therefore, considered to be an upstream input that can be used for supplying WHQA products. Hence, ComReg's approach is to treat retail and/or wholesale LLs sold using third party's passive access infrastructure (e.g. dark fibre) in the same way as retail and/or wholesale LLs sold using own passive access infrastructure. This approach is in line with the MGF principle as non SMP regulated dark fibre sales would not be affected by existing regulation in the WHQA Market. ComReg notes that it has adopted a similar approach for products such as Local Loop Unbundling ('**LLU**') as these are considered to fall within the scope of Wholesale Local Access for mass-market products provided at a fixed location ('**WLA**')¹⁸⁶ and can be used as an upstream input for supplying WHQA products.
- 3.115 As discussed in paragraphs 4.86 to 4.90 below, ComReg remains of the opinion that dark fibre is not likely to be an effective substitute for WHQA products, but rather, is used as an upstream input to supply downstream services including WHQA products. Hence, ComReg is of the view that its approach to treating LLs sold using third parties' dark fibre remains valid and is consistent with approaches adopted by other NRAs¹⁸⁷.

¹⁸⁵ See paragraphs 5.69 to 5.71 of the 2016 Consultation.

¹⁸⁶ Corresponding to Market 3A in the European Commission's 2014 Recommendation.

¹⁸⁷ For example, see Ofcom's interpretation of on-net wholesale LL sales in [Ofcom \(2015\), 'Business Connectivity Market Review – Review of competition in the provision of leased lines', consultation document, 15 May, Annex A15.26.](#)

- 3.116 ComReg also disagrees with BT's comment regarding Oxera's interpretation of the Broadband Cost Reduction Directive (BCRD)¹⁸⁸ and its relevance to the WHQA market review. In this regard, Oxera indicated that the availability of access to passive infrastructure such as trenches and ducts is typically not sufficient in itself to act as a competitive constraint on suppliers of WHQA products due to, amongst other things, time and investments required for rolling out fibre and setting up various network nodes/exchanges and electronic switches. ComReg does, however, recognise that passive access infrastructure inputs such as access to ducts and poles can be used by SPs to extend their own access networks and provide downstream wholesale and/or retail services, including LLs. Such access can be an important driver of competition in the medium to long term.
- 3.117 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that dark fibre services are unlikely to be a sufficiently effective substitute to retail LLs such that they would fall within the same product market.

Whether wireless LLs should be excluded from the proposed retail product markets

- 3.118 ComReg notes Respondents' views in relation to substitutability between wired and wireless LLs as summarised in paragraphs 3.36 to 3.39 above. In order to assess Respondents' views, ComReg considered that it was necessary to further investigate this matter. In particular, using information obtained via the 2016 SIRs ComReg has examined the profile of retail LL customers¹⁸⁹ as well as their purchases of retail LLs. In addition, ComReg considered that it was necessary to conduct interviews with end-users of LLs and seek their views on the substitutability between wired and wireless LLs. Finally, ComReg has inspected the bidding information supplied by SPs in order to examine the level of any competitive constraint posed by suppliers of wireless LLs.
- 3.119 In paragraphs 3.120 to 3.155 below ComReg considers the following:
- (j) Product characteristics;
 - (k) Pricing; and

¹⁸⁸ Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014, on measures to reduce the cost of deploying high-speed electronic communications networks. Transposed into Irish law with S.I. No. 391/2016 - European Union (Reduction of Cost of Deploying High-Speed Public Communications Networks) Regulations 2016.

¹⁸⁹ In particular, customers size' (in terms of premises) and sector (i.e. whether customer is from private/commercial sector or a public service organisation).

(I) Intended use and substitution

Product characteristics

- 3.120 ComReg notes ALTO's, Enet's and Vodafone's comments noted in paragraphs 3.36 to 3.38 above with regard to significant differences in service quality levels of wired and wireless LLs. ComReg also notes that Respondents did not provide any material evidence indicating that potential technical limitations of wireless LLs such as, Line of Sight ('LoS') issues or licenced spectrum availability, are of significant relevance in Ireland. In the 2016 Consultation¹⁹⁰ ComReg highlighted such potential issues, but was of preliminary view that they are unlikely to impede wireless LL SPs' ability to supply wireless LLs over the period of this review.
- 3.121 In this regard, ComReg notes that the majority of interviewed multi-site retail LL customers expressed their satisfaction with the quality of wireless LLs as indicated by Table 5 below. Three interviewees stated that LoS issues were experienced, but two of them noted that these issues were quickly resolved by their SP. Other issues, such as, bandwidth scalability and service disruptions due to adverse weather conditions were also mentioned by interviewees.

Table 5: Interviewees' views on product characteristics of wireless LLs

Interviewees' views (16 interviewees expressed their views) (Multiple responses were given)	Number of interviewees
No major prolonged service issues	10 (62.5%)
Experienced LoS issues	3 (18.8%)
Installation of antennae was not easily facilitated	2 (12.5%)
Service disruptions due to adverse weather conditions	2 (12.5%)
Negative opinion based on legacy issues	1 (6.3%)

¹⁹⁰ See paragraphs 4.64 to 4.74 of the 2016 Consultation.

Concerned about security of unlicensed wireless P2P links	1 (6.3%)
Bandwidth is not easily scalable	1 (6.3%)

- 3.122 However, it should be noted that despite the positive views on product characteristics of LLs, the majority of interviewees (12 out of 17) expressed their preference for using wired LLs as primary data connectivity services due to perceived better service availability and bandwidth scalability in comparison to wireless LLs. In ComReg's view, this perception is likely to be a significant factor influencing end-users' LL purchasing decisions.
- 3.123 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that, from the perspective of technical overview of product characteristics, wireless LLs are comparable to wired LLs, with the exception of the provision of LL services at higher bandwidths (>300Mb/s). However, ComReg observed that end-users perceive wired LLs as having superior quality when compared to wireless LLs and has taken these perceptions into account when assessing substitutability between wired and wireless LLs.

Pricing

- 3.124 ComReg notes ALTO's and Vodafone's views summarised in paragraph 3.37 above that prices of wireless LLs are significantly higher than prices of wired LLs. ComReg questions whether prices quoted by Vodafone in its submission are the prices for comparable LL products. While the bandwidths of compared products is the same, it is not clear whether appropriate comparisons are being made given other factors affecting the pricing of LL products such as, for example, end-user location and length of the LL connection from the end-user location to serving network node of the SP. Also, it appeared to ComReg that the CoS or priority queuing features and corresponding pricing were not comparable between the two products listed by Vodafone. Thus, the pricing comparison submitted by Vodafone cannot be regarded as convincing evidence that there is a substantial difference between prices of wired and wireless LLs.

3.125 In the 2016 Consultation¹⁹¹ ComReg noted that the pricing of wireless LLs observed from bids for HEAnet contract appeared to be broadly comparable vis-à-vis prices for wired bids as 2/3rds of the bids were won by suppliers of wireless LLs. Furthermore, in order to assess Respondents' views, ComReg has also examined whether average revenues per LL are substantially different for wired and wireless LL SPs. While this simplified assessment does not account for differences between product characteristics of sold LLs, it would highlight significant differences in average revenues per LL if, as argued by Vodafone, wireless LLs are twice as expensive as wired LLs. In this regard, ComReg's analysis highlights that there are no substantial differences between average revenues per LL earned by SPs of wired and wireless LL. In fact, average revenues per LL earned by [3<] (SPs that are supplying mainly wireless LLs) are amongst the lowest average revenue per LL earned by LL SPs. Finally, in ComReg's view, growing demand for wireless LLs as highlighted in the 2016 Consultation¹⁹² would not be likely to have occurred if wireless LLs were significantly more expensive than wired LLs.

3.126 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that prices of wireless LL are broadly comparable to prices of wired LLs.

Intended Use and substitution

3.127 Information obtained via 2016 SIRs indicates that wireless LL are purchased by approximately 31% of all retail LL purchasers¹⁹³. However, only 18% of all retail LL purchasers are solely relying on wireless LL. ComReg also examined the amount of circuits purchased by this group of LL end-users. In this regard, 31 (7.8%) end-users purchasing both wired and wireless LLs bought 10 or more wireless LLs, with another 35 (8.8%) purchasing between 5 and 9 wireless LLs. The remaining 333 end-users (83.5%) individually purchased less than 5 wireless LLs. Overall, wireless LLs account for 26.4% of all LLs purchased by these 399 end-users and only 20% of these end-users purchased more wireless than wired LLs.

3.128 ComReg has also analysed LL purchasing decisions made by multi-site customers, as these end-users purchase the majority of retail LLs¹⁹⁴.

¹⁹¹ See paragraphs 4.75 to 4.78 of the 2016 Consultation.

¹⁹² See paragraphs 3.38 to 3.43 of the 2016 Consultation.

¹⁹³ A sum of purchasers of wireless LL only and purchasers of both wired and wireless LLs.

¹⁹⁴ See paragraph 3.66 of this Further Consultation.

3.129 Table 6 below indicates that 44% of multi-site LL customers are purchasing wireless LLs, but only 4% are solely relying on wireless LL for their data connectivity needs. Amongst end-users purchasing both wired and wireless LLs (237 end-users), only 25% purchased more wireless than wired circuits.

Table 6: LLs purchased by retail end-users by physical media

Number of end-users	Frequency	Percent
Number of retail end-users purchasing wired LLs only	2,155	68.89%
Number of retail end-users purchasing wireless LLs only	574	18.35%
Number of retail end-users purchasing both wireless and wired LLs	399	12.76%
Total	3,128	100%
Number of multi-site end-users purchasing wired LLs only	327	55.42%
Number of multi-site end-users purchasing wireless LLs only	26	4.41%
Number of multi-site end-users purchasing both wireless and wired LLs	237	40.17%
Total	590	100%

3.130 Table 6 suggests that while there is a significant minority of end-users purchasing wireless LLs, most end-users tend to purchase wired LLs. This is particularly the case for the sites that are critical for business operations (e.g. headquarters and data centres)¹⁹⁵. However, this information does not identify whether the intended use of wireless and wired LLs is different as argued by ALTO and Vodafone. For example, it might be the case that the majority of purchased wireless LLs are used as secondary data connectivity services and provide backup to a primary wired LL connection. In this way, such services are likely to be considered complimentary in nature rather than substitutable.

¹⁹⁵ This evidence is based on observed end-user premises addresses.

3.131 In this regard, ComReg notes that, as set out in Table 7 below, interviews with end-users of LLs indicated that while the majority of interviewees (14 out of 17) are purchasing wireless LLs, only 5 of them¹⁹⁶ noted that wireless LLs are used as primary data connectivity services. Two of these interviewees¹⁹⁷ noted that the decision to purchase wireless LLs as primary data connectivity services was made due to a lack of available fibre infrastructure in the areas where their sites are located, while another 3 interviewees stated that providers of wireless LLs offered better value in terms of bandwidth and price than providers of wired LLs.

Table 7: LL services used by interviewees

Type of data connectivity services used	Number of interviewees
Wired LLs as a primary service	8 (47.1%)
Both wired and wireless LLs as a primary service	4 (23.5%)
Both wired LLs and business broadband as a primary service	4 (23.5%)
Both wireless LLs and business broadband as a primary service	1 (5.9%)
Dark fibre	3 (17.6%)
Wired LLs as a back-up service for resilience purposes	2 (11.8%)
Wireless LLs as a back-up service for resilience purposes	8 (47.1%)
Business broadband as a back-up service for resilience purposes	7 (41.2%)

¹⁹⁶ [3< [REDACTED]].

¹⁹⁷ [3< [REDACTED]].

3G/4G mobile broadband as a back-up service for resilience purposes	2 (11.8%)
Total use of wired LLs (primary or back-up links)	17 (100%)
Total wireless LLs (primary or back-up links)	14 (82.4%)

- 3.132 Thus, information obtained via interviews with end-users of LLs suggests that most of these customers are not likely to view wireless LLs as an effective substitute to wired LLs in instances where both types of services are available.
- 3.133 Furthermore, in order to supplement information obtained from interviews with multi-site retail LL customers, in 2017 SIRs ComReg specifically asked SPs to identify whether wireless LLs sold to retail customers are used to support a primary or secondary data connectivity service. The majority of SPs were unable to identify the intended use of wireless LLs, with only Airspeed noting that in instances where it was aware of its customers' intended use of wireless LLs¹⁹⁸ [REDACTED] wireless LLs sold as of 2016 (18.9%) were used as a back-up service while [REDACTED] (81.1%) were used as a primary data connectivity service.
- 3.134 As noted in paragraph 3.131 above, wireless LLs are more likely to be purchased by end-users that have premises located in areas with limited fibre availability. In this regard, ComReg's analysis of competitive conditions in the MI WHQA Markets¹⁹⁹ indicates that the majority of customer premises connected with wireless LLs (64% of all premises connected with wireless LLs) are located in Zone B with 43% of all customer premises connected with wireless LLs located in Zone A with two alternative networks or in proximity to an Enet MAN with alternative sources of supply of backhaul.
- 3.135 In relation to the take up of wireless retail LLs, the rate of growth in the number of wireless LLs has stalled in 2016 both in terms of overall number of P2P radio links licences issued by ComReg²⁰⁰ and overall number of wireless LLs sold to end-users²⁰¹.

¹⁹⁸ Airspeed indicated the intended use for [REDACTED] (35.9%) wireless LLs sold at the end of 2016.

¹⁹⁹ See Section 5.2.3 of this Further Consultation.

²⁰⁰ There were 12,287 live P2P radio links licences as of Q3 2017 compared to 12,227 in Q2 2015 (an increase of 0.5%).

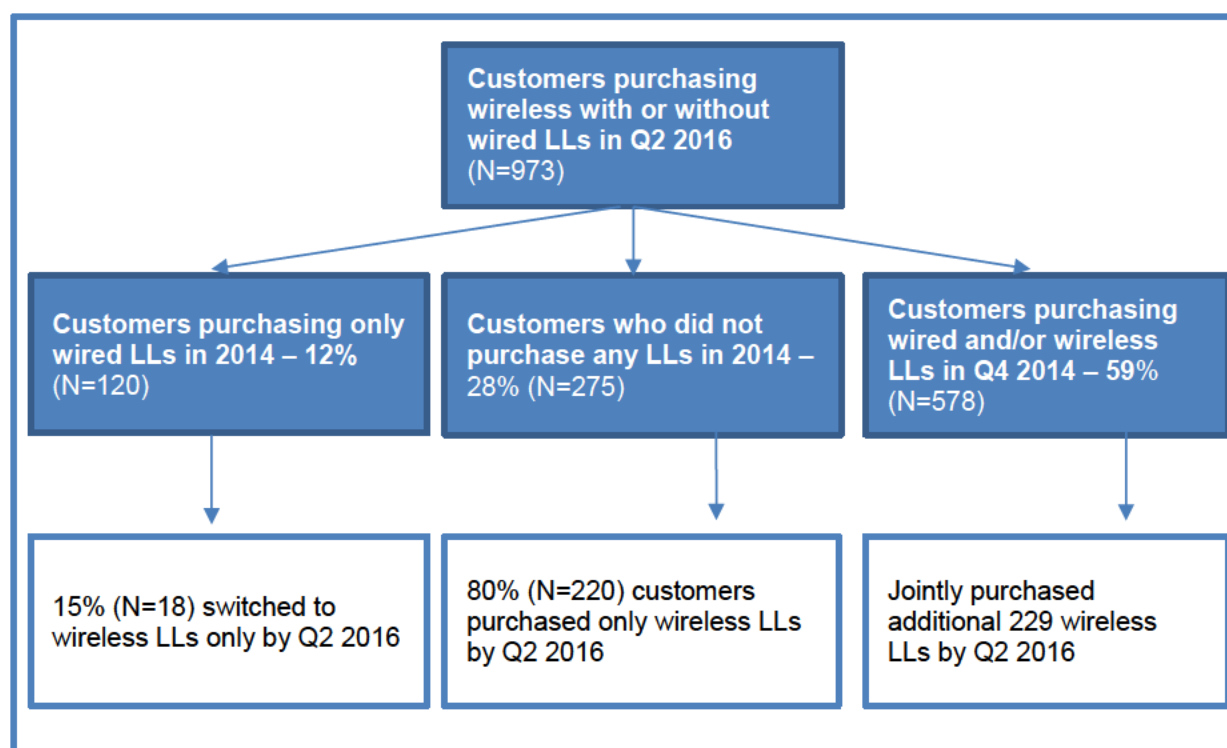
²⁰¹ The total number of wireless LLs bought at the end of 2016 (2,630) was slightly less than the same period one year ago (2,775).

- 3.136 ComReg's analysis of SPs' customer lists indicates that there appears to be very limited switching from wired to wireless LLs. In this regard, ComReg has examined the list of SPs' customers purchasing wireless LLs in Q2 2016 (973 customers) and, using information obtained from SPs via the December 2014 SIRs, examined these customers' LL purchasing decisions for the period 2014.
- 3.137 Figure 6 below shows that of 973 end-users purchasing wireless LL in Q2 2016, 578 (59%) were also purchasing wireless LLs during the period of 2014. It also indicates that these end-users have increased their demand for wireless LLs and jointly purchased additional 229 wireless LLs by the end of Q2 2016. 120 out of 973 customers were purchasing wired LLs only during the period of 2014. However, observed evidence shows that only 15% of these customers made a complete switchover from wired to wireless LLs with the majority of such customers adding wireless circuits to the existing stock of purchased wired LLs rather than replacing them.²⁰² ComReg was not able to identify 2014 LL purchasing decisions of the remaining 275 end-users. This means that these end-users are either new customers of LLs or their names were not supplied by SP's via the December 2014 SIRs²⁰³.

²⁰² ComReg understands that the majority of this 15% were single site users and that HEAnet purchased a significant proportion of these on behalf of secondary schools.

²⁰³ In this regard, ComReg notes that December 2014 SIR was not issued to [§< [REDACTED]] and, thus ComReg cannot observe [§< [REDACTED]] customers' purchasing decision in the period of 2014.

Figure 6: Retail LL customers' switching to wireless LLs



3.138 Thus, Figure 6 indicates that there is limited evidence of end-users migrating from wired to wireless LLs as growth in the total number of wireless LLs is largely accounted by customers who are purchasing LLs for the first time²⁰⁴ and customers who decided to purchase additional LLs.

3.139 In this context, a recent 2016 HEAnet's tender for the provision of data connectivity services to 275 secondary level schools in the Dublin/Meath/Kildare area appears to be an exception to purchasing decisions made by other multi-site retail LL customers as some of the schools that were previously served with wired LLs switched to SPs of wireless LLs²⁰⁵.

²⁰⁴ These customers are typically SMEs purchasing 1 to 3 LL circuits. ComReg notes that the presented evidence does not imply that wireless LLs providers are acquiring the majority on new customers as ComReg has not inspected how many new customers were acquired by SPs of wired LLs between Q4 2014 and Q2 2016.

²⁰⁵ HEAnet indicated that in this competition [3<] schools switched from fibre to wireless LLs while [3<] schools switched from wireless to fibre-based services.

- 3.140 Substitution between wired and wireless LLs was also assessed in ComReg's interviews with multi-site retail LL customers. In particular, interviewees that are currently using wired LLs as primary data connection links were asked whether they would consider to continue purchasing these services or switch to wireless LLs if the price of such wired LLs were to increase by 5% to 10%.
- 3.141 5 out of 13 interviewees who responded to this question, noted that they would consider using wireless LLs if service quality and price were comparable to that offered by SPs supplying wired LLs. However, it should be noted that two of these five interviewees indicated that providers of wireless LLs were not considered as potential suppliers of data connectivity services during the most recent supplier selection process. The remaining 8 interviewees indicated that they would not consider using wireless LLs for primary data connectivity services.
- 3.142 It should also be noted that 4 interviewees that are currently using wireless LLs as primary data connection links indicated their preference for fibre LLs if these services were available and prices were comparable to prices of wireless LLs. Two of these interviewees also stated that they would be willing to pay a premium for fibre LLs.
- 3.143 In order to further ascertain the level of substitutability between wired and wireless LLs, ComReg has asked SPs to supply the list of bids for the provision of data connectivity services to retail business customers in 2016. ComReg has used this data to perform a tender participation frequency analysis which typically leads to the following potential outcomes:
- (m) If suppliers of wireless LLs are rarely participating in the same tenders as providers of wired LLs, the competitive constraint posed by suppliers of wireless SPs is likely to be limited as they compete for a different profile of customers;
 - (n) Frequent participation of suppliers of wired and wireless LLs in the same tenders would be an indication that suppliers of wireless LLs exert significant competitive pressure on suppliers of wired LLs, especially in light of evidence that providers of wireless LLs are frequently winning such tenders.
- 3.144 It should be noted at the outset that [§< [REDACTED]] provided very limited information on the bids they made for LL tenders in 2016. Furthermore, [§< [REDACTED]] informed ComReg that some of the information relating to unsuccessful bids may not be recorded in its database and thus, [§< [REDACTED]] bidding information should not be regarded as a comprehensive or objective analysis of [§< [REDACTED]] retail LL market activity.

3.145 The impact of these issues is illustrated in Table 8 below. ComReg has merged bidding information received from SPs and identified 769 end-users who issued tenders for LL services in 2016. Out of these, ComReg identified only 86 end-users (11%) who received bids from 2 or more LL SPs. In general, end-users receiving several bids tend to be large multi-site retail LL customers such as corporates and public sector organisations.

Table 8: Number of participants in tenders for LLs issued in 2016

2016	Frequency
1 participant	683 (88.8%)
At least 2 participants	86 (11.1%)
Observations (Number of end-users)	769

3.146 While ComReg considers that SPs are selective and tend to participate in tenders only if they expect to have a reasonable chance of winning them, ComReg is of the view that bidding information obtained from SPs is not reflective of actual retail LL market activity as there are significant gaps in data.

3.147 Nevertheless, ComReg inspected whether SPs of wired and wireless LLs are targeting the same end-users when participating in tenders. Table 9 illustrates that out of 86 end-users receiving more than one bid in response to their tenders, 28 (32.6%) received bids from both wired and wireless LL SPs. In relation to end-users requesting several LLs²⁰⁶ as part of the same tender, 8 (38.1%) received bids from both wired and wireless LL SPs. Thus, a degree of competitive interaction between wired and wireless LL can be observed from tender participation analysis.

Table 9: Media of LLs utilised in tenders with at least two participants

2016	Frequency
Number of customers' tenders requesting at least one LL	86
None of submitted bids used wireless LLs	53 (61.6%)
Some of submitted bids used wireless LLs	28 (32.6%)
All of submitted bids used wireless LLs	5 (5.9%)
Number of customers' tenders requesting multiple LLs	21
None of submitted bids used wireless LLs	10 (47.6%)
Some of submitted bids used wireless LLs	8 (38.1%)
All of submitted bids used wireless LLs	3 (14.35%)

²⁰⁶ 21 end-users requested several LLs as part of the same tender.

- 3.148 Furthermore, suppliers of wireless LLs tend to be relatively successful in tenders where they compete against suppliers of wired LLs. For example, wireless LL suppliers were successful in 14 out of 28 tenders (50%) that included suppliers of wired LLs. It should be noted however, that [§< [REDACTED]] bidding information revealed that these SPs tend to be selective²⁰⁷ when deciding whether to use wireless LLs in their bid submissions. In particular, wireless LLs are more likely to be used in bids where these SPs are trying to retain their wireless LL customers and in bids where customers request back up services or have remote site locations in rural areas.
- 3.149 To conclude, bidding information obtained from LL SPs does indicate a degree of competitive interaction between suppliers of wired and wireless LLs, particularly in instances where tenders are issued by end-users who already purchase wireless LLs. However, the received volume and quality of the information is not of sufficient quality to form a data set that would enable ComReg to draw firm conclusions on this matter and, thus, ComReg has attached little weight to this evidence in forming its preliminary view on the degree of substitution between wired and wireless LLs.
- 3.150 In relation to Airspeed's and Enet's views summarised in paragraph 3.36 above that many end-users are explicitly specifying the requirement for fibre-based services in their tenders, ComReg notes that such arguments are not backed up by firm evidence. On the contrary, bid data obtained from SPs via the 2017 SIRs and examined by ComReg indicates that, typically, end-users requiring LL services specify the nature of required services (e.g. WAN connectivity), bandwidth and required level of quality. In turn, SPs design bids which might include wired and/or wireless LLs based on availability of either media at requested locations. Thus, ComReg is of the view that preferences for LL media are revealed at the bid evaluation stage as opposed to tendering invitation stage. However, ComReg notes that some bid specifications themselves, while being transmission neutral, may rule out wireless LL services. For example, some end-users are requesting circuits with bandwidth of 1Gb/s and above for connections to data centres and main sites, thus automatically ruling out wireless LLs SPs that cannot compete for services of such bandwidth.

²⁰⁷ For example, [§< [REDACTED]] proposed to use wireless LLs in 28% of bids that it participated in during 2016.

- 3.151 ComReg does not dispute the fact that some customers of LLs view wireless LLs as an effective substitute for wired LLs. In this regard, ComReg highlighted in the 2016 Consultation²⁰⁸ that a significant amount of wireless LLs have been installed by SPs to provide retail services to HEAnet for the ‘Schools 100 Mb/s High-Speed’ programme²⁰⁹. However, HEAnet’s LL purchasing decisions appear to be somewhat different from purchasing decisions made by other multi-site retail LL customers according to responses obtained from ComReg’s interviews. In particular, HEAnet is willing to deal with multiple suppliers and accepts SPs’ bids for individual schools. Moreover, as noted in paragraph 3.139 above, HEAnet perceives wireless LLs as an effective substitute for wired LLs.
- 3.152 ComReg also does not dispute Eircom’s comments (noted in paragraph 3.124) that wireless LLs are deployed nationwide to deliver data connectivity services. However, the available information indicates that wireless LLs predominately tend to be used either as a back-up services to wired LLs or in areas where it is not economical to provide fibre based LLs. Thus, ComReg is of the preliminary view that wireless LLs are unlikely to be a sufficiently effective substitute to wired LLs such that they would fall within the same product market. This view is supported by evidence set out in paragraphs 3.136 to 3.148 above and in particular, end-users’ perceptions of wireless LLs and the observed low level of switching from wired to wireless LLs.
- 3.153 Having regard to evidence presented in paragraphs 3.127 to 3.152 above, it is ComReg’s preliminary view that substitution patterns between wired and wireless LLs as well as the intended use of these services support Respondent’s views that wireless LLs are unlikely to be viewed as an effective substitute for wired LLs by the majority of LL end-users. ComReg does, however, recognise that some end-users may rely solely on wireless LLs to fulfil their data connectivity needs.

²⁰⁸ See paragraph 3.42 of the Consultation.

²⁰⁹ HEAnet noted that approximately 2/3rds of 2nd level schools purchase wireless Ethernet based retail LL services. ComReg estimates that HEAnet purchases approximately [3<] of all retail wireless LLs.

Overall Preliminary Conclusions on substitutability between wired and wireless LLs

- 3.154 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's has decided to amend its preliminary position set out in the 2016 Consultation and is of preliminary view that wireless LLs are unlikely to be an effective substitute for LLs provided over a wired medium. While ComReg remains of the view that wireless LLs are comparable to wired LLs from a products characteristics and pricing perspective, end-users' perceptions²¹⁰ and limited substitution between wired and wireless LLs indicates that a hypothetical monopolist ('HM')²¹¹ of wired LLs is likely to be able to sustain a profitable Small but Significant Non-transitory Increase in Price ('SSNIP')²¹² in the range of 5-10% above the competitive level without a substantial number of customers switching to wireless LL services
- 3.155 The substitutability between wired and wireless LLs at the wholesale level is assessed in Section 4. For the reasons set out therein, ComReg is of preliminary view that wireless WHQA products do not fall within the same market as wired WHQA products. Nevertheless, ComReg considers any competitive constraint posed by suppliers of wireless LLs when carrying out competition analysis and assessment of SMP in Section 5.

Whether subnational geographic retail markets exist

- 3.156 ComReg is of the preliminary view that the retail MI LLs market is likely to be National in scope. However, having regard to the analysis in Section 4, the wholesale markets that supports the retail market are not and subnational geographic markets are likely to exist at the wholesale level.
- 3.157 Amongst the rationale for the retail market likely being national in scope is based on the fact that the majority of multi-site retail customers of HQA demand a single vendor and 'turn-key solutions' to meet their multi-site HQA connectivity needs. As such, retail providers of WHQA source wholesale inputs from a mix of on-net and off-net inputs to provide connectivity solutions to retail customers.

²¹⁰ As noted in paragraph 3.114 the majority of interviewed Multi-site retail LL customers perceived wired LLs as superior to wireless LLs from products characteristics perspective.

²¹¹ The hypothetical monopolist test ('HMT') involves observing the response to a small but significant non transitory increase in price ('SSNIP') in the price of the focal product. If a significant number of customers switch to an alternative product, making the price increase unprofitable, then the alternative product is also included in the relevant product market.

²¹² Ibid.

3.158 Furthermore, the Respondents views in relation to the geographic scope of the retail market described in paragraphs 3.40 to 3.42 above made particular reference to the heterogeneity of infrastructure rollout throughout the State. In ComReg's view this supports the view expressed in Section 4 that subnational wholesale markets exist. This is because access to wholesale services where competing infrastructure is not available, allows SPs to compete on a national basis at the retail level.

Demand side substitution

3.159 As noted in paragraph 3.141 in relation to the discussion on multi-site retail demand, purchasers of retail MI LLs require connectivity to disparate locations in various geographic regions. Such purchasers - in general - tender for such purchases on a nationwide basis and require a single vendor to meet their total connectivity needs.

3.160 It should also be noted that retail purchasers of retail MI LLs tender for the whole contract and all geographic locations and do not price separately for each individual connection.

3.161 Furthermore, ComReg is of the view that although the presence of electronic communications infrastructure can be an important factor in the location decisions of some retail demand, it is not such that a significant portion of retail demand would switch their premises location to avail of better prices for retail MI LLs.

3.162 As such, even in the absence of regulation at the wholesale level, retail purchasers of retail MI LLs are unlikely to geographically relocate in order to avail of more competitive retail MI LLs in another location.

Supply-side substitution

3.163 As detailed in Chapter 4, ComReg is of the preliminary view that there are two MI WHQA markets, Zone A MI WHQA and Zone B MI WHQA. Moreover, the same high fixed costs, economies of scale and scope, that act as a bar to entry and expansion in the Zone B MI WHQA, are likely to exist at the retail level in those areas meaning that - absent regulation – providers of retail MI LLs are unlikely to significantly increase their geographic supply of retail LLs to the extent that it would constrain an SP with SMP in the Zone B MI WHQA market.

Preliminary Conclusion on Geographic Market Definition

3.164 The European Commission notes in its SMP Guidelines that

*In general, the process of defining the geographic boundaries of markets involves identifying any geographic areas where a distinct break in competitive conditions can be observed. This approach places weight on the underlying structural and behavioural factors that are relevant in determining the competitiveness of a market*²¹³

- 3.165 Although the structural factors of supply-side substitution point to a break in geographic competitive condition for retail MI LLs, ComReg considers that the behaviour of retail MI LLs customers is more important in ascertaining the geographic scope of the retail MI LLs market.
- 3.166 Moreover, it is this demand behaviour at the retail level that underpins the need for a precise and granular geographic market definition and competition assessment at the wholesale level to allow regulation to ensure that the retail market is effectively competitive at a National level.
- 3.167 As such, ComReg is of the preliminary view that the geographic scope of the retail MI LL market is National and wholesale geographic considerations are analysed at the wholesale level in the next chapter.

Difficulties in expressing views due to the redaction of text

- 3.168 As noted in paragraph 3.45 above, ALTO, BT, Enet and Vodafone commented on ComReg's practice of redacting commercially sensitive/confidential information in the 2016 Consultation.
- 3.169 ComReg recognises that there is a balance to be struck between protecting confidential and/or commercially sensitive information and the need to provide sufficient reasoning to both support ComReg's analysis and to allow interested parties make informed and meaningful comments. ComReg notes that information (including market share information) was redacted on the basis of it being cited by Respondents as being confidential and/or commercially sensitive (including that it could be used to reverse engineer other confidential/commercially sensitive information) and ComReg is obliged to treat this information as such. It should be noted, however, that in instances where ComReg has redacted market share information in the 2016 Consultation, indicative market share ranges were provided in footnotes²¹⁴. The 2016 Consultation also provided²¹⁵ the ability for individual SPs to have visibility of their own redacted information, and this was availed of in a number of cases.

²¹³ European Commission SMP Guidelines, paragraph 56.

²¹⁴ For example, see paragraphs 5.25, 5.224, 6.26, 6.101 and 6.113 of the 2016 Consultation.

²¹⁵ See paragraph 1.57 of the 2016 Consultation.

- 3.170 ComReg also notes that during the meetings with SPs ComReg has asked SPs to consider whether they would agree to disclose market share information, but has not received permission to do so from any SP. Therefore, ComReg continues to treat market share information as confidential/commercially sensitive, but does provide indicative market share ranges where appropriate. However, we reserve our position on this and may revisit it in the future.
- 3.171 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that redacted information did not preclude Respondents from making informed and meaningful comments. ComReg has adopted similar approach to redacting commercially sensitive/confidential information in this Further Consultation and provides indicative market share ranges in instances where market share information is redacted.

Other issues

- 3.172 ComReg does not agree with BT's comments summarised in paragraph 3.46 above that ComReg has excessively relied on products' technical characteristics in its retail market assessment. In the 2016 Consultation²¹⁶, products' technical characteristics were assessed alongside other factors such as pricing, intended use of services, observed substitutability patterns and SPs' views on substitutability between various products. Supply side substitution was also taken into consideration when defining retail LL product markets. However, in ComReg's view, it is important to highlight technical differences between various products as such differences can frequently drive the demand for these products. In this regard, ComReg notes that the 2014 Market Research indicated²¹⁷ that product characteristics such as service availability, resilience, contention and bandwidth are important factors for retail end-users when selecting a SP for the supply of data connectivity services. ComReg's interviews with Multi-site retail LL customers further supported this evidence, as all interviewees noted that service availability, service quality (e.g. resilience) and costs were important factors when selecting a LL supplier.

²¹⁶ See paragraphs 4.09 to 4.208 of the 2016 Consultation.

²¹⁷ See Table 4 of the 2016 Consultation and slides 33 and 87 of the 2014 Market Research.

- 3.173 In relation to BT's comments noted in paragraph 3.46 above on the assessment of focal product, ComReg understands that Ethernet services may be delivered to end-user premises using xWDM technology or transported over a WDM core or backbone. However, the predominant MI service provided to, and demanded at retail level is Ethernet by some orders of magnitude compared to others such as WDM and other fibre based MI services such as FDDI and FICON. These MI technologies are now increasingly being used by businesses that have very high bandwidth requirements but Ethernet remains the most widespread MI interface technology deployed by far. ComReg considered that it is important to make a distinction between these types of interfaces and to assess the extent of substitutability between them, rather than automatically define a single retail MI LL market as part of the focal product definition²¹⁸.
- 3.174 ComReg notes BT's view in relation to the importance of bespoke pricing and tendering in the retail LL market. Pricing evidence (amongst other factors) was assessed and taken into consideration throughout the 2016 Consultation and in particular when assessing the product market definition at both retail and wholesale levels.
- 3.175 ComReg does not agree with BT's assertion that switching costs are not material when changing LL interfaces. As noted in the 2016 Consultation²¹⁹, switching costs when migrating between LLs with different interfaces might limit end-users' responsiveness to a SSNIP. Such costs include monetary (e.g. change of equipment at end-user premises) and non-monetary (the potential risk of service disruption) costs. Given the potential savings that could be made when migrating from TI and MI LLs²²⁰, ComReg considers that switching costs are of significant importance to end-users that continue to purchase TI LLs. Hence, ComReg remains of the view that switching costs is one of the factors that limits the rate of end user migration from TI to MI LLs.
- 3.176 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that its approach to the assessment the Retail WHQA Market(s) remains valid.

²¹⁸ Similar approach was taken by Ofcom in its consideration of product market definition for Contemporary Interface Symmetric Broadband Origination (CISBO). See paragraphs 4.10 to 4.245 in [Ofcom \(2016\), 'Business Connectivity Market Review – Review of competition in the provision of leased lines', Statement document, 28 April](#) "Ofcom's BCMR Decision".

²¹⁹ See paragraph 4.160 of the Consultation.

²²⁰ See price differences between TDM and Ethernet LLs highlighted in Table 10 of the Consultation.

3.4 ComReg's Overall Preliminary Position on the Retail Market Assessment

3.177 Having considered Respondents' views referred to in paragraphs 3.9 to 3.46 above, along with developments in the market generally, ComReg has decided to amend its preliminary view of the Retail HQA Market(s) as set out in the 2016 Consultation. In particular, ComReg's preliminary position is that wireless LLs do not fall within the same market as wired LLs. ComReg maintains its view with respect to all other aspects of the Retail HQA Market(s) assessment.

3.178 Overall ComReg's preliminary position is that:

- (a) The appropriate starting focal point at the retail level for the assessment of potential product substitutes for retail LLs are LL services provided over an Ethernet interface (whether on a standalone basis or in a bundle with other services);
- (b) There are likely to be three distinct retail LL product markets which can be summarised as follows:
- (c) Low Bandwidth Traditional Interface ('**TI**') Retail Market consisting of all wired retail LLs carried over analogue, digital and TDM interfaces with bandwidths of $\leq 2\text{Mb/s}$ (the '**Retail Low Bandwidth ('LB') TI HQA Market**'); and
- (d) High Bandwidth TI Retail Market which consists of all wired retail LLs provided over a TDM interface with bandwidths $> 2\text{Mb/s}$ (the '**Retail High Bandwidth ('HB') TI HQA Market**'); and
- (e) Modern Interface ('**MI**') Retail Market consisting of all wired retail LLs carried over modern technology interfaces such as Ethernet, EFM, xWDM and other modern high bandwidth interfaces (the '**Retail MI HQA Market**'); and
- (f) The above product markets (together referred to as the '**Relevant Retail Markets**') do not include wireless LLs due to the lack of effective demand supply and demand side substitutability between wired and wireless LLs;
- (g) Asymmetric business broadband is not considered a substitute for a retail LL due to the lack of effective supply and demand side substitutability between the products;
- (h) Passive infrastructure, such as Dark Fibre, is not considered to be an effective substitute for a retail LL due to the investment and expertise needed to provide retail LL using such passive infrastructure; and

- (i) The geographic scope of the Relevant Retail Markets is National, but there are likely to be subnational geographic markets for the provision of MI WHQA products, with this assessed in the context of the MI WHQA market definition in Section 4 below.

Question 1: Do you have any further observations on ComReg's Retail Market Assessment?

4 Definition of the Relevant WHQA Markets

4.1 Introduction

- 4.1 In this Section, ComReg details its analysis of the Responses to the 2016 Consultation and sets out its further views in relation to the product and geographic market definition of the relevant WHQA markets. From the outset, it is important to note that ComReg's views on the parameters of the market definition have evolved since the 2016 Consultation having regard to additional information and analysis. In particular, ComReg is now of the view that;
- (a) Wireless P2P radio links are not likely to be an effective substitute for WHQA provided over wired media, and
 - (b) That subnational geographic markets are likely to exist for the provision of MI WHQA.
- 4.2 In relation to the geographic market assessment for MI WHQA, ComReg is of the further view that two separate geographic markets exist based on the presence and competitive effects of competing infrastructure. These are;
- (a) Zone A: Areas of Dense Infrastructure Investment
 - (b) Zone B: Areas of Low Infrastructure Investment.
- 4.3 Furthermore, ComReg has set out a revised boundary between the MI WHQA Markets and the Trunk which is now delineated with reference to competing SPs interconnection and/or proximity to Eircom Aggregation Nodes. In effect, this extends the Trunk Boundary to 107 Aggregation Nodes where three or more SPs are present and active in the provision of MI WHQA²²¹.
- 4.4 This is in contrast to the current position under the 2008 Decision where wholesale leased lines services provided between 20 urban locations are considered to be Trunk segments.²²²
- 4.5 This Section is set out as follows:

²²¹ This is presented at the end of this section as the analysis based on the same principles as the geographic assessment of the MI WHQA market.

²²² Please note that this exercise was not undertaken for the 2016 Consultation as ComReg was of the preliminary view that no SP was likely to be considered to have SMP in the MI WHQA market, irrespective of how the Trunk/Terminating boundary was delineated.

- (a) Section 4.2 summarises ComReg’s preliminary views as set out in the 2016 Consultation;
- (b) Section 4.3 gives an overview of issues raised by Respondents in their Submissions
- (c) Section 4.4 details ComReg’s assessment of Respondents’ views overall and details ComReg’s further preliminary views in relation to the MI WHQA product market definition and further Assessment of the Geographic Scope of the MI WHQA Product Market(s) (Section 4.4.3)
- (d) Section 4.5 sets out ComReg’s further views in relation to the Trunk/Terminating boundaries for the WHQA markets; and
- (e) Section 4.6 concludes with a summary of the further preliminary position.

4.2 Preliminary views set out in the 2016 Consultation

4.6 In Section 5 of the 2016 Consultation, ComReg set out the framework for its definition of wholesale markets²²³ and, in light of this, considered the boundaries of the Relevant WHQA Markets from product and geographic perspectives. This involved assessing the effectiveness of any direct constraints from demand-side substitutes and/or supply-side substitutes, the effectiveness of any indirect constraints, the delineation of the trunk-terminating WHQA boundary and a chain of substitution analysis²²⁴. In so doing, ComReg considered the following:

- (a) the treatment of SPs’ wholesale LL supply to their own retail arms, referred to as self-supply²²⁵;
- (b) The identification of the focal WHQA products, being the initial products from which any potential wholesale substitute products were then considered²²⁶;
- (c) An assessment of the MI WHQA product market²²⁷;
- (d) An assessment of the TI WHQA product markets²²⁸; and

²²³ See paragraphs 5.8 to 5.14 of the 2016 Consultation.

²²⁴ See Paragraphs 5.88-5.110 of the 2016 Consultation

²²⁵ See paragraphs 5.20 to 5.24 of the 2016 Consultation.

²²⁶ See paragraphs 5.25 to 5.32 of the 2016 Consultation.

²²⁷ See paragraphs 5.33 to 5.146 of the 2016 Consultation.

²²⁸ See paragraphs 5.147 to 5.182 of the 2016 Consultation.

- (e) The geographic scope of the Relevant WHQA Markets²²⁹.
- 4.7 In defining the MI WHQA product market, ComReg was of the preliminary view that Ethernet wholesale LLs should form the focal product for the purpose of the WHQA product market assessment. ComReg then undertook a demand-side substitution analysis and considered whether alternative WHQA products should be included in the relevant WHQA product market. In particular, in the 2016 Consultation ComReg assessed whether the following products should be included in the same market as Ethernet LLs provided over wired networks:
- (a) WHQA Ethernet LLs provided over alternative wired networks²³⁰;
 - (b) WHQA Ethernet LLs provided over wireless networks²³¹;
 - (c) Wholesale broadband products²³²;
 - (d) Dark fibre products²³³;
 - (e) TDM WHQA products²³⁴; and
 - (f) xWDM and other very high bandwidth WHQA LL products²³⁵.
- 4.8 ComReg also undertook a chain of substitution analysis in order to assess whether a chain of substitution exists between MI WHQA LL products offered at various bandwidths to assess whether they were sufficiently close and thereby subject to a common pricing constraint (and therefore warranted inclusion in the same product market)²³⁶.
- 4.9 ComReg then assessed the potential effectiveness of supply-side substitution from:
- (a) Alternative SPs of MI LL services²³⁷;

²²⁹ See paragraphs 5.189 to 5.237 of the 2016 Consultation.

²³⁰ See paragraphs 5.40 to 5.46 of the 2016 Consultation.

²³¹ See paragraphs 5.47 to 5.63 of the 2016 Consultation.

²³² See paragraphs 5.64 to 5.68 of the 2016 Consultation.

²³³ See paragraphs 5.69 to 5.71 of the 2016 Consultation.

²³⁴ See paragraphs 5.72 to 5.81 of the 2016 Consultation.

²³⁵ See paragraphs 5.82 to 5.86 of the 2016 Consultation.

²³⁶ See paragraphs 5.88 to 5.110 of the 2016 Consultation.

²³⁷ See paragraphs 5.116 to 5.119 of the 2016 Consultation.

- (b) SPs offering broadband services²³⁸; and
 - (c) SPs of dark fibre services²³⁹.
- 4.10 ComReg then concluded its analysis of the MI WHQA product market by considering the existence and effectiveness of any indirect constraints²⁴⁰ and assessing where the appropriate boundary between MI WHWQ trunk and -terminating segments lay²⁴¹.
- 4.11 Similarly, in assessing the TI WHQA product market, ComReg undertook demand-side substitution analysis and considered whether Analogue and Digital WHQA products fall within the same product market as TDM based WHQA LLs²⁴². ComReg also undertook a chain of substitution analysis²⁴³ and then assessed supply-side substitution²⁴⁴.
- 4.12 ComReg concluded its analysis of the TI WHQA product market by considering the existence of indirect constraints²⁴⁵ and the trunk-terminating WHQA boundary²⁴⁶.

4.2.1 WHQA Product Market Definition

- 4.13 ComReg was of the preliminary view that the self-supply of SPs' active in the relevant WHQA of wholesale LLs to their retail businesses form part of the Relevant WHQA Markets due to the fact that such supply is typically readily divertible to the wholesale merchant market. However, ComReg also expressed the view that Eircom's supply of WHQA products to its mobile arm, Eircom Group Mobile, and its joint subsidiary Tetra, as well as MNOs' internal supply of LL connectivity to their own downstream mobile operations, were considered to be outside of scope of the Relevant WHQA Markets as such supply is likely to be captive.²⁴⁷

²³⁸ See paragraphs 5.120 to 5.123 of the 2016 Consultation.

²³⁹ See paragraphs 5.124 to 5.126 of the 2016 Consultation.

²⁴⁰ See paragraphs 5.130 to 5.135 of the 2016 Consultation.

²⁴¹ See paragraphs 5.136 to 5.143 of the 2016 Consultation.

²⁴² See paragraphs 5.150 to 5.154 of the 2016 Consultation.

²⁴³ See paragraphs 5.155 to 5.167 of the 2016 Consultation.

²⁴⁴ See paragraphs 5.169 to 5.173 of the 2016 Consultation.

²⁴⁵ See paragraphs 5.174 to 5.175 of the 2016 Consultation.

²⁴⁶ See paragraphs 5.176 to 5.180 of the 2016 Consultation.

²⁴⁷ See paragraph 6.111 of the 2016 Consultation.

- 4.14 In identifying the focal products (being the starting point from which the substitution assessment would commence), ComReg noted that Eircom's Ethernet WHQA products are likely to represent a suitable starting point for the product market definition exercise given that Eircom is the largest supplier of all WHQA products²⁴⁸ and the majority of its sales were Ethernet based wholesale LL circuits²⁴⁹.
- 4.15 Having considered issues highlighted in paragraph 4.6 to 4.12 above, ComReg's preliminary view was that there are likely to be three separate WHQA product markets together referred to as the '**Relevant WHQA Markets**':
- (a) Low Bandwidth ('**LB**') Traditional Interface ('**TI**') WHQA Market consisting of all wholesale LLs carried over analogue, digital and TDM interfaces with bandwidths of $\leq 2\text{Mb/s}$ (the '**LB TI WHQA Market**'); and
 - (b) High Bandwidth ('**HB**') TI WHQA Market which consists of all wholesale LLs provided over a TDM interface with bandwidths $> 2\text{Mb/s}$ (the '**HB TI WHQA Market**'); and
 - (c) Modern Interface ('**MI**') WHQA Market consisting of all wholesale LLs carried over modern technology interfaces such as Ethernet, EFM, xWDM and other such high bandwidth interfaces (the '**MI WHQA Market**').
- 4.16 The identification by ComReg of separate LB TI WHQA, HB TI WHQA and MI WHQA markets related to underlying differences in demand-side and supply-side conditions. In particular, ComReg noted that:
- (a) There is likely to be asymmetric substitution between TI and MI based WHQA products in that there is a general trend of migration to MI based services at both retail and wholesale levels. Thus, TI WHQA products are not likely to be effective substitutes for MI WHQA products²⁵⁰.

²⁴⁸ Eircom had [redacted] of all on-net wholesale LL sales at the end of 2015.

²⁴⁹ Wholesale Ethernet based LL accounted for [redacted] of all Eircom's wholesale LL sales at the end of 2015.

²⁵⁰ See paragraphs 5.72 to 5.81 of the 2016 Consultation.

- (b) The chain of substitution analysis²⁵¹ indicated that TI WHQA products with bandwidths of up to and including 2Mb/s display substantive differences in terms of pricing and conditions of competition in comparison to HB TI WHQA products²⁵².
- 4.17 ComReg was of preliminary view that the Relevant WHQA Markets are likely to be transmission media neutral. In particular, ComReg noted that wireless P2P links used to provide WHQA are likely to be within the scope of the Relevant WHQA Markets²⁵³ due to similar product characteristics, pricing and the increased uptake of wireless LL at a retail level which, in turn, led to an increased demand for wireless WHQA products²⁵⁴.
- 4.18 WHQA products supplied by Eircom's competitors using alternative wired and/or wireless networks were also considered to be within the scope of the Relevant WHQA Markets as ComReg's preliminary view was that these products and services were considered to be sufficiently substitutable with each other as to form part of the same market²⁵⁵.
- 4.19 ComReg's preliminary view was that the Relevant WHQA Markets do not include:
- (a) Asymmetric business broadband: Asymmetric business broadband was not considered a substitute for a WHQA LL due to significant differences in terms of product characteristics, pricing and the intended use by end-users²⁵⁶; and
 - (b) Passive infrastructure: Passive infrastructure, such as dark fibre, was not considered to be an effective substitute for a WHQA LL due to substantial fixed and ongoing variable costs associated with using dark fibre to provide an active LL as well as the limited uptake of dark fibre services to date²⁵⁷.

²⁵¹ A chain of substitution refers to the substitutability between a number of similar products which could lead to each of these products being part of the same product market. The concept of 'chain of substitution' is described in the EC Notice on Market Definition (paragraphs 56-58).

²⁵² See paragraphs 5.155 to 5.168 of the 2016 Consultation.

²⁵³ See paragraphs 5.47 to 5.63 of the 2016 Consultation.

²⁵⁴ In this regard ComReg noted that suppliers of wholesale wireless LLs such as Airspeed and Digiweb have contracts with several Access Seekers.

²⁵⁵ See paragraphs 5.40 to 5.46 of the 2016 Consultation.

²⁵⁶ See paragraphs 5.64 to 5.68 of the 2016 Consultation.

²⁵⁷ See paragraphs 5.69 to 5.71 of the 2016 Consultation.

4.2.2 Geographic Scope of the Relevant WHQA Markets

4.20 In the 2016 Consultation ComReg then assessed the geographic scope of the Relevant WHQA Markets having regard to the following criteria:

- (a) geographic differences in entry conditions over time²⁵⁸;
- (b) variation in the number and size of potential competitors²⁵⁹;
- (c) distribution of market shares²⁶⁰; and
- (d) evidence of differentiated pricing strategies or marketing²⁶¹.

4.21 ComReg's preliminary view was that the Relevant WHQA Markets are likely to be national in scope.²⁶²

4.22 In relation to TI WHQA Markets²⁶³, ComReg noted that there appeared to be insufficient variations in the number and size of potential competitors or distribution of market shares given that Eircom and BT supply the vast majority of TI WHQA LLs. As TI LL services are mainly provided over a copper network and are mainly of a legacy nature, ComReg considered it unlikely that sufficient differences in competition or entry conditions had or would develop over the duration of this market review to warrant the delineation of subnational geographic TI WHQA markets. ComReg also noted the lack of evidence of geographically differentiated pricing or marketing that might indicate the presence of different regional or local competitive conditions.

²⁵⁸ See paragraphs 5.199 to 5.201 of the 2016 Consultation for the assessment of geographic scope of TI WHQA Product Markets and paragraphs 5.207 to 5.214 for the assessment of geographic scope of MI WHQA Product Market.

²⁵⁹ See paragraphs 5.202 of the 2016 Consultation for this aspect of the assessment of geographic scope of TI WHQA Product Markets and paragraphs 5.215 to 5.221 for the assessment of geographic scope of MI WHQA Product Markets.

²⁶⁰ See paragraphs 5.203 of the 2016 Consultation for this aspect of the assessment of geographic scope of TI WHQA Product Markets and paragraphs 5.222 to 5.229 for the assessment of geographic scope of MI WHQA Product Markets.

²⁶¹ See paragraphs 5.204 of the 2016 Consultation for this aspect of the assessment of geographic scope of TI WHQA Product Markets and paragraphs 5.230 to 5.235 for the assessment of geographic scope of MI WHQA Product Markets.

²⁶² This was consistent with ComReg's preliminary view that the Relevant Retail LL Markets were likely to be national in scope.

²⁶³ See paragraphs 5.199 to 5.206 of the 2016 Consultation.

4.23 In relation to the MI WHQA Market²⁶⁴, ComReg noted that the presence of alternative networks has increased since the 2008 Decision, particularly in the Business Parks²⁶⁵. However, ComReg's initial analysis of competitive conditions inside/outside of Business Parks indicated that all SPs of MI WHQA products supply services in both areas, although the distribution of market shares amongst them in these areas was somewhat different²⁶⁶. ComReg also noted the lack of evidence of geographically differentiated pricing or marketing that did not, in itself, indicate the presence of different regional or local competitive conditions.

4.3 Respondents' Views

4.3.1 Respondents' Views on WHQA Product Market Definitions

- 4.24 9 out of 12 Respondents expressed views on ComReg's definition of the scope of the WHQA Markets from a product perspective.
- 4.25 ALTO, Airspeed, BT, Cogent, Eircom, Enet, GTT, Three and Vodafone disagreed with various elements of ComReg's assessment.
- 4.26 ComReg has summarised the Respondents' views on the definition of the WHQA product markets, grouping the key issues raised into the identified themes below, namely:
- (a) Whether the Relevant WHQA Markets should exclude wireless LLs (discussed in paragraphs 4.27 to 4.29 below);
 - (b) Whether the Relevant WHQA Markets should include dark fibre services (discussed in paragraphs 4.30 to 4.33 below);
 - (c) Whether the Relevant WHQA Markets should include wholesale broadband services (discussed in paragraph 4.34 below)

²⁶⁴ See paragraphs 5.207 to 5.237 of the 2016 Consultation.

²⁶⁵ In the 2016 Consultation, business parks, data centres and campuses of Higher Education Providers were collectively referred to as Business Parks. See Appendix: 5 of the 2016 Consultation for full list of Business Parks.

²⁶⁶ In this regard ComReg noted that the delineation or otherwise of separate geographic MI WHQA Markets would not have impact upon ComReg's preliminary views on its assessment of competition in the MI WHQA Market.

- (d) The existence of separate lower and higher bandwidth TI WHQA and MI WHQA Markets given ComReg's chain of substitution analysis (discussed in paragraphs 4.35 to 4.38 below); and
- (e) ComReg's assessment of mobile backhaul services (discussed in paragraph 4.39 below).

Whether the Relevant WHQA Markets should exclude wireless LLs

- 4.27 7 of 12 Respondents expressed views on this issue. Airspeed, Cogent, Enet, GTT, Three and Vodafone disagreed that wireless LL fell within the scope of the Relevant WHQA Markets. In this regard, Cogent argued that it cannot substitute wired LLs delivering speeds of 100Mb/s and above with wireless connections. Three noted that due to inferior service availability and capacity constraints, wireless LLs are not useable in many instances.
- 4.28 Enet and Vodafone reiterated their views expressed in relation to substitutability of wired and wireless LL at the retail level²⁶⁷, in particular that wireless LLs have higher prices and lower service quality levels compared to wired LLs and that there are differences in intended use of wired and wireless LLs by retail End-Users.
- 4.29 Eircom agreed that wireless WHQA products are effective substitutes for wired WHQA products and provided what it saw as supporting evidence relating to successful bids by wireless LL SPs in response to HEAnet's tenders for provision of data connectivity services to secondary schools²⁶⁸. In Eircom's view, this evidence showed that Eircom's competitors supplying wireless LLs were successful in winning HEAnet's tenders and, thus, in Eircom's view indicated a high level of substitutability between wired and wireless LLs.

²⁶⁷ See paragraph 3.38 above.

²⁶⁸ In June 2009 the Minister for Communications, Energy and Natural Resources, in collaboration with the Minister for Education and Science, announced the 100Mb/s broadband initiative for post-primary schools. HEAnet were subsequently appointed to manage the school broadband network which currently provides synchronous 100Mb/s data connectivity as well as managed school router, centralised content filtering, centralised firewalling, anti-virus, and associated IT services to approximately 780 second level schools throughout Ireland. Further information is available at <http://www.heanet.ie/>.

Whether the Relevant WHQA Markets should include dark fibre services

- 4.30 3 of 12 Respondents expressed views on this issue. ALTO, BT and Eircom disagreed that dark fibre services should be excluded from the Relevant WHQA Markets.
- 4.31 BT made comparisons with the market review relating to business connectivity services in the United Kingdom ('UK')²⁶⁹ and argued that Ofcom, the UK NRA, had included dark fibre services in the product market by virtue of imposing these services as a remedy. In BT's view, dark fibre is, therefore, considered by Ofcom as an effective substitute for wholesale LLs.
- 4.32 ALTO and BT, in commenting on ComReg's approach to SMP assessment,²⁷⁰ also did not agree that active LLs based on rented third party dark²⁷¹ fibre should be counted as a SPs' owned infrastructure access network when calculating SPs' market shares c. More specifically, BT noted that:
- "This has a parallel with how Ofcom undertook its data analysis in the UK but Ofcom was clear that at the conceptual level, this did not constitute owned infrastructure by the operator and that any SMP assessment using service shares at the active level ought to take this into account. We consider that ComReg's ownership approach leads to multiple counting of network existence distorting the totals and making network deployments look far more comprehensive than they actually are in reality."*²⁷²
- 4.33 Eircom pointed out that competitive constraints can differ in retail and wholesale markets and noted that several dark fibre suppliers have enabled SPs to construct their own networks for the provision of active LLs. Eircom also highlighted the scalability of dark fibre services and argued that provision of LLs via rented dark fibre is a cost-effective way to provide LL services.

²⁶⁹See [Ofcom \(2016\), 'Business Connectivity Market Review – Review of competition in the provision of leased lines', Statement document, 28 April](#) "Ofcom's BCMR Decision".

²⁷⁰ Although this issue was raised in the context of the SMP assessment, ComReg is of the view that it is more relevant to the Market Definition assessment.

²⁷¹ Rented dark fibre refers to fibre that is rented from a 3rd party and used to provide LLs and other services.

²⁷² BT's Submission, page 17.

Whether the Relevant WHQA Markets should include wholesale broadband services

4.34 4 of 12 Respondents expressed views on this issue. Eircom was of the view that wholesale broadband products are, in some circumstances, credible alternatives to WHQA products and reiterated the views it expressed on the retail market that these services are effective substitutes at the retail level²⁷³. The other submissions agreed with ComReg's position.

The existence of separate lower and higher bandwidth TI WHQA and MI WHQA Markets given ComReg's chain of substitution analysis

4.35 3 of 12 Respondents expressed views on this issue. BT agreed that there are separate LB TI WHQA, HB TI WHQA and MI WHQA markets. However, in BT's view there is a break in the chain of substitution at 1GB/s in the MI WHQA market, thus meriting the identification of a separate HB MI WHQA product markets at this bandwidth. BT noted that breaks in the chain of substitution were found by other NRAs and was of the view that SPs' market shares would be different if two separate MI WHQA Markets were defined.

4.36 BT considered that ComReg's chain of substitution analysis in assessing the MI WHQA product market was inadequate. BT argued that ComReg's analysis did not incorporate SSNIP tests when assessing product substitutability at various bandwidths. In BT's view, the 2014 Market Research failed to ascertain End-Users' propensity to switch between different bandwidth services.

4.37 BT noted that a pricing analysis of MI WHQA products is not sufficient in itself to establish whether there is a single chain of substitution and believed that:

*"...the focus should be on the alternative analysis of competitive conditions identifying bandwidth as a rough proxy for site value."*²⁷⁴

4.38 Enet questioned ComReg's preliminary view that there are two separate TI WHQA markets. In Enet's view, fibre-based TI and MI WHQA products constitute a single product market. In this regard, Enet noted that the Maltese NRA ('MCA') recently defined WHQA market containing LLs of all bandwidths.

²⁷³ See paragraph 3.31 above.

²⁷⁴ BT's Submission, page 11.

ComReg's assessment of mobile backhaul services

4.39 1 of 12 Respondents expressed views on this issue. BT disagreed that SPs' self-supply of mobile backhaul services is a captive market and, thus, that such self-supply should be excluded from the Relevant WHQA Markets. In this regard, BT noted that Meteor's Radio Access Network ('RAN') is partly enabled through a network sharing arrangement with Three²⁷⁵ and is not controlled by Eircom. BT also alluded to [3< [REDACTED]] which, in its view, also merits the inclusion of mobile backhaul services in the Relevant WHQA Markets.

4.3.2 Geographic Scope of the WHQA Markets

- 4.40 10 out of 12 Respondents expressed views on ComReg's definition of the geographic scope of the WHQA Markets.
- 4.41 Eircom agreed with ComReg's assessment that the Relevant WHQA Markets are national in scope, and provided a breakdown of market shares in different geographic locations based on winning bids from HEAnet's tenders for provision of data connectivity services to secondary schools.
- 4.42 Airspeed, ALTO, BT, Cogent, Enet, GTT, Verizon, Virgin Media and Vodafone disagreed with ComReg's assessment and argued that there are marked differences in the competitive conditions for the provision of MI WHQA services outside of Business Parks and that these differences should be reflected in the geographic scope of the proposed MI WHQA market.
- 4.43 ComReg has summarised the Respondents' main views on the WHQA geographic market definition below, grouping the key issues raised into the identified themes below, namely:
- (a) Competitive conditions outside of Business Parks (discussed in paragraphs 4.44 to 4.56 below);
 - (b) ComReg's approach to assessing the geographic scope of the Relevant WHQA Markets is inadequate (discussed in paragraphs 4.58 to 4.63 below).

²⁷⁵ This is referred to as the MOSAIC network sharing agreement.

Competitive conditions outside Business Parks

- 4.44 10 of 12 Respondents expressed views on this issue. Airspeed, Cogent, Enet and GTT were of the view that Eircom's network is the sole option for obtaining fibre based WHQA access to a large number of premises nationwide including Dublin and other urban areas.
- 4.45 ALTO and Vodafone referred to the ubiquity of Eircom's network and argued that ComReg has not sufficiently assessed the possibility of the existence of subnational markets where the demand for LL services is not concentrated.
- 4.46 A number of SPs raised issues regarding the homogeneity of competitive conditions outside of Business Parks.
- 4.47 BT stated that:
- "Regarding the geographic market, fundamentally we do not believe that Oxera was able to conduct a proper granular analysis and simply relying on business parks will be quite inadequate; by definition they constitute the likely targets for competitive infrastructure and are similar in that way to data centres."*²⁷⁶
- 4.48 It further went on to state that there are
- "...parts of the State where there is little infrastructure and this begs the question why ComReg consider the market competitive... We consider ComReg overly reliant on the business park study..."*²⁷⁷
- 4.49 BT believed that outside of Dublin, Eircom and Enet are the main WHQA suppliers and supplemented its arguments by providing an example of a geographic location where [§< [REDACTED]]. In BT's view, this example accurately describes the competitive landscape in other areas across the State.
- 4.50 BT also disagreed with Oxera's interpretation of SPs' strategic approach to own network roll-out noting that SPs such as BT extend their networks on a case-by-case basis utilising third party WHQA products.²⁷⁸
- 4.51 BT then went on to identify four separate geographic markets where, in its view, distinct competitive conditions exist:
- (a) Dublin;

²⁷⁶ Section 2.4, BT Submission.

²⁷⁷ Ibid.

²⁷⁸ Oxera stated that leased line network roll-out and provision follows businesses in general: See Annex 1 of the 2016 Consultation for more details.

- (b) data centres;
 - (c) Metropolitan Area Network ('MAN') areas; and
 - (d) The remaining areas;
- 4.52 In BT's view, its identified Data Centres market could be considered as competitive and argued that ComReg has not adequately analysed this segment of the MI WHQA Market, thus, affecting the overall assessment of geographic scope of the MI WHQA Market. In this regard, BT made reference to Ofcom's treatment of data centres in its review of WHQA market. BT also noted that Eircom's competitors have only limited network coverage in Dublin and have not replicated the ubiquity of Eircom's network.
- 4.53 Cogent, enet GTT, HEAnet, Three, Virgin and Vodafone all raised similar concerns regarding the homogeneity of competitive conditions throughout the State for the MI WHQA market. ²⁷⁹
- 4.54 Enet stated that [redacted] in a deregulated WHQA market. In particular,
- "enet operates [redacted] MANs around the country²⁸⁰, with backhaul services from [redacted] of these locations provided via its own network [redacted] and by [redacted] and other carriers. [redacted]*
- [redacted] If the market is deregulated, eir will no longer be obliged to continue providing wholesale backhaul services [redacted]*
- [redacted].]"*
- 4.55 Verizon noted that while there might be several suppliers of WHQA services in the major cities, data centres and business parks, this is not likely to be the case in the less urban areas and more remote locations. It noted that there are only three viable providers of WHQA products outside of main urban centres and Business Parks namely Eircom, BT and Enet. In this respect, Verizon stated that

²⁷⁹ See Respondents' Submissions at <https://www.comreg.ie/publication/market-review-wholesale-high-quality-access-fixed-location-non-confidential-responses-received-comreg-document-1669/>

²⁸⁰ 88 of these MANs are operated by Enet under concession agreements awarded by the Department of Communications, Climate Action and Environment ('DCCA') and are located in 94 towns or urban areas.

“..there are only three viable providers of wholesale LL in Ireland outside the main urban centres and business parks – eir, BT and Enet. While carriers like COLT, Vodafone and Virgin Media do provide services to Verizon, they have a very limited footprint and it is not national in scope. There are no other providers in Ireland who have the necessary footprint to offer service on a national basis, i.e. also in more remote areas.”

- 4.56 Virgin Media noted that there are certain routes where Eircom is the only supplier of high-bandwidth services and cited Ashbourne and Ratoath as examples where Eircom is the sole supplier for backhaul services. Virgin Media was of the view that:

*“ComReg’s proposed geographic market definition does not appear to reflect the significant underlying variation in competitive conditions observable in the provision of wholesale high quality access across Ireland. There is a risk that analysing competition on a national basis will not provide sufficient detail for ComReg to identify competition problems that could arise on individual routes.”*²⁸¹

- 4.57 Furthermore, Virgin stated that:

*“There are certain routes where Eir is the only provider of high-bandwidth services. For example, Openeir are the only available provider for 10G WUP backhaul services into Ratoath and Ashbourne. Virgin Media is concerned that if regulation were lifted on non-contested routes, then eir, in the absence of a competitive constraint, could increase the price. This could impact on the ability of alternative operators, including NBP bidders, to provide retail broadband in certain areas. From a Virgin Media perspective, price increases on non-competitive routes could undermine the business case for extending the coverage of our high-speed broadband network into new areas.”*²⁸²

ComReg’s approach to assessing the geographic scope of the Relevant WHQA Markets is inadequate

- 4.58 5 of 12 Respondents expressed views on this issue. ALTO and Vodafone expressed their concern in relation to ComReg’s lack of conclusion on alternative networks’ proximity to business premises i.e. reachability analysis due to data limitations and highlighted Access Seekers’ dependency on Eircom in more remote areas. Vodafone argued that there are other approaches that would identify the competitive conditions in these areas, but did not specify these approaches in more detail.

²⁸¹ Virgin Media’s Submission, page 1.

²⁸²Page 1; Virgin Media Submission.

- 4.59 ALTO and BT were critical of the quality of information that ComReg relied upon in the Consultation.
- 4.60 BT argued that ComReg has placed too much emphasis on the analysis of competitive conditions inside of Business Parks and noted that ComReg has not assessed alternative networks' presence outside of Business Parks. In BT's view, there is limited infrastructure competition outside of Business Parks and referred to network maps presented in Oxera's report. BT also noted that the majority of business premises would be outside of Business Parks and queried whether the sample size of businesses inside of identified Business Parks is significant.
- 4.61 BT also alluded to the absence of a disaggregated geographic analysis of competitive conditions and was of the view that ComReg should have assessed SPs' ability to offer LL services absent regulation. In this regard, BT referred to Ofcom's analysis of geographic competitive conditions in the postal sector.
- 4.62 Verizon was of the view that ComReg's analysis of competitive conditions in different geographic areas might be inaccurate due to the difficulties faced by ComReg when collecting information from SPs and urged ComReg to re-consider its assessment of geographic scope of WHQA market.
- 4.63 Virgin Media argued that ComReg should have identified non-competitive routes and maintained regulation on routes where Eircom faces no competition. Virgin Media referred to Ofcom's review of wholesale broadband access markets, where exchange service areas with several competing networks were deregulated.

4.4 ComReg's Assessment of Respondents' Views

- 4.64 In paragraphs 4.24 to 4.63 above, ComReg summarised the key issues raised by Respondents concerning ComReg's preliminary definition of the WHQA Markets from both product and geographic perspectives. ComReg considers these views below.

4.4.1 Assessment of Respondents' Views on WHQA Product Market Definitions

- 4.65 Below, ComReg assesses Respondents' views on the WHQA product market definition under each of the key themes identified in paragraph 4.26 above, in particular:
- (a) Whether the Relevant WHQA Markets should exclude wireless LLs (discussed in paragraphs 4.66 to 4.84 below);
 - (b) Whether the Relevant WHQA Markets should include dark fibre services (discussed in paragraphs 4.86 to 4.99 below);

- (c) Whether the Relevant WHQA Markets should include wholesale broadband services (discussed in paragraphs 4.100 to 4.105 below);
- (d) The existence of separate lower and higher bandwidth TI and MI WHQA markets given ComReg's chain of substitution analysis (discussed in paragraphs 4.106 to 4.117 below); and
- (e) ComReg's assessment of mobile backhaul services (discussed in paragraphs 4.118 to 4.119 below).

Whether the Relevant WHQA Markets should exclude wireless LLs

- 4.66 ComReg notes Respondents' views on substitutability between wired and wireless LLs at the wholesale level as summarised in paragraphs 4.27 to 4.29 above. As noted in paragraph 4.17 above, in the 2016 Consultation ComReg was of preliminary view that wholesale wireless LLs are likely to fall within the same relevant WHQA product market as wired WHQA products. This preliminary view was largely influenced by ComReg's assessment of retail HQA market(s) where ComReg considered that wired and wireless LLs are within the same product market. Furthermore, the wide variety of spectrum bands that are capable of supporting LL services²⁸³ and attendant licences meant that ComReg considered that providers of wired WHQA could easily switch to providing WHQA over P2P radio links.
- 4.67 Thus, ComReg was of the preliminary view that a sufficient number of Access Seekers purchasing wired WHQA products are likely to switch to wholesale wireless LLs in response to a 5-10% increase in the price of wired WHQA products given that the demand for WHQA products is primarily derived from an Access Seeker's demand for inputs for the provision of retail LL services, such to make a price increase unprofitable. In addition, ComReg noted that, where products are used for network inputs (e.g. mobile backhaul), Access Seekers may use wireless WHQA products even in locations where wired WHQA products are available.

²⁸³ ComReg currently licences users for general P2P links in a variety of bands from 6GHz to 38GHz, each with its own characteristics in terms of capacity and propagation; this allows users to tailor LL to their particular needs. Furthermore, much of the harmonised spectrum that has been released by ComReg in recent years, for example 3.6GHz, also lends itself to the provision of LL.

Wireless based MI WHQA used to connect to End-Users

- 4.68 In paragraphs 3.118 to 3.155 above concerning the retail HQA market definition, ComReg re-assessed the substitutability of wired and wireless LLs having regard to the 2016 Consultation and considered Respondents' views. For the reasons set out therein, ComReg has decided to amend its preliminary view set out in the 2016 Consultation and exclude wireless LLs from the retail HQA product market definition. While evidence presented in Section 3 above may not support Respondents' views with respect to inferior service quality and higher prices of wireless LLs when compared to wired LLs, ComReg's Interviews with End-users of LLs indicated that private sector Multi-site retail LL customers have a strong preference for wired LLs and are more likely to use wireless LLs as backup service or only in locations where fibre infrastructure is not available.²⁸⁴ Thus, ComReg agrees with Vodafone's and ALTO's view that there are differences in the intended use and demand conditions of wired and wireless LLs by end-users.
- 4.69 This view was reinforced by evidence gathered from SPs and from commercial entities²⁸⁵ in interviews in regard to tendering and bidding for retail multisite contracts for private commercial organisations. Although detailed tendering information was not always available from SPs, ComReg noted that in many instances, wireless operators did not enter competitions for large multisite requirements of such organisations. This contrasted with public service and governmental bodies which are legally obliged to undertake a detailed and robust tendering process and record and document all bidding information and corresponding decisions. The fixed SPs who competed for these commercial multisite contracts did in some instances use wholesale wireless operators but typically only to order to offer backup services to their retail customers.

²⁸⁴ It should be noted that some Public sector retail demand for HQA is more price sensitive and is likely to consider wired and wireless leased lines to be substitutes. However, this subset of overall demand is not considered sufficient that it can have a significant impact on the overall demand for MI WHQA.

²⁸⁵ Appendix 5 Interviews with End-users of LLs.

- 4.70 ComReg notes evidence presented by Eircom relating to bids in response to a HEAnet's tenders for provision of data connectivity services to secondary schools. However, as noted in Section 3 above²⁸⁶, HEAnet's LL purchasing decisions are different to those of other Multi-site retail LL customers and it has developed a highly sophisticated procurement strategy. HEAnet is an atypical customer and many SPs treat it as a wholesale customer due to its large volume demand and its broad requirements. It acts as an aggregator of IT services including connectivity and IT security services for 2nd and 3rd level education institutions. To do so it uses a variety of dark fibre, very large bandwidth managed services in addition to medium range MI LLs, connecting secondary schools with 100Mb retail MI LLs. HEAnet effectively "auctions" individual connectivity requirements in order to leverage the keenest commercial advantage and has been able to impose bespoke service level requirements and performance criteria on its suppliers. It arranges its own network management integration and is easily able to manage multiple network and infrastructure suppliers.
- 4.71 The location of many secondary schools are in non-commercial areas and tend to be situated in residential areas away from business parks and high-streets and traditionally, these were areas of less dense fibre availability. Moreover, in its submission HEAnet noted the lack of competitive fibre networks outside main urban commercial areas and did not consider that wireless was an alternative to wired services for bandwidth requirements greater than 300Mb/s.
- 4.72 In contrast to the HEAnet's procurement practice, ComReg's interviews with multi-site End-users with sophisticated connectivity requirements indicated that these type of customer have a preference for wired LLs and are more likely to use wireless LLs as a backup service on in locations where fibre was not available²⁸⁷. Furthermore, in contrast to HEAnet, the evidence gathered in interviews with 17 such customers clearly demonstrated that the majority of Multi-site retail LL customers' procurement policies is to have a sole SP that can fulfil retail connectivity requirements to all of their sites.

²⁸⁶ See paragraph 3.139 above.

²⁸⁷ In this regard, in the 2016 Consultation ComReg noted that HEAnet explicitly expressed its preference for wired LLs by placing a [3<] score premium for bids that included fibre based LLs.

- 4.73 The majority indicated that they would only deal with SPs of wireless LLs if SPs of wired LLs cannot provide fibre services in their site locations. Unlike HEAnet, these commercial organisations require turn-key solutions and prefer to use a single supplier. The overhead for managing separate invoicing, ordering and particularly, fault management streams were cited as reasons for preferring one supplier.
- 4.74 Furthermore, one SP, namely [redacted] was of the view that P2P wireless based retail MI LL services are used for connectivity to more remote locations for mobile backhaul services in areas lacking sufficient fibre connectivity but that its preference was always to use fibre where it was available.²⁸⁸
- 4.75 Although many IT personnel in these organisations did not consider wireless inferior to fixed services at low to medium bandwidth, overall organisational procurement policies were heavily or exclusively biased towards wired services. The perception at senior decision making levels was that fibre based services are better. The possible consequences associated with solely using wireless was seen as too risky. For example, by one interviewee who cited the example of a newly placed crane on a nearby building site to their HQ causing intermittent interruptions to connectivity services²⁸⁹
- 4.76 The perception of wireless based retail MI LLs as being inferior to wired based MI LLs, along with the large proportion of retail multisite lines sold (almost 75% of total retail line sold (refer to table 2 Section 3) has significant implication for the substitutability of wireless based MI WHQA with wired MI WHQA.
- 4.77 Having considered the evidence offered and completing its own detailed investigation, ComReg agrees with Vodafone's and ALTO's view that there are differences in the intended use of wired and wireless LLs by end-users.

Wireless use for network inputs

- 4.78 Where WHQA products are used as network inputs or backhaul by SPs (other than mobile base stations or B-nodes), ComReg notes that typically such services are large capacity circuits²⁹⁰, utilised by operators when they need to meet large aggregate demand. These demands may be generated by significant numbers of downstream consumers (e.g. triple or double play broadband, voice and TV end users) or concentrations of retail and/or wholesale WHQA customers, or a combination of both.

²⁸⁸ Meeting with ComReg 28 Sept 2017.

²⁸⁹ Meeting with [redacted] 16 February 2017.

²⁹⁰ Typically bandwidths greater than 1Gb/s

- 4.79 These circuits are used to connect between network nodes or PoPs of a SP's to allow it connect to an isolated node to which it has no direct connectivity through its own network. These circuits are purchased on the basis of a 'build or buy' decision and when a SP has built up a sufficient customer base at this remote PoP, it may then justify the build-out of network to replace the purchased circuit.
- 4.80 In their responses to consultation, both Enet and Virgin Media were of the view that portions of their networks were dependent on Eircom for such backhaul services as there were no alternative fixed networks present. They also stated that wireless could not provide an alternate service due to its capacity constraints and that therefore, current and future investments would be in jeopardy if regulated MI WHQA inputs were not available to them to satisfy this specific requirement.
- 4.81 Virgin Media stated that it required [§< [REDACTED]
[REDACTED]
[REDACTED]]²⁹¹, irrespective of other possible business or wholesale demand. It cited Ratoath and Ashbourne as locations where it was currently dependent on Eircom for backhaul services. The Market Analysis team has verified that Virgin Media currently purchases these services from Eircom and that Eircom is the only fixed provider with network in both of these towns.
- 4.82 Enet stated that [§< [REDACTED]] of its 88 government owned Metropolitan Area Networks ('MANs'), would become stranded as connectivity to SPs' core networks was based on the use of regulated MI WHQA.²⁹² ComReg investigated refreshed data provided by Enet and clashed this against other SP network mapping and circuit information and also met with other relevant stakeholders. ComReg calculated that [§< [REDACTED]] MANs were so dependent. Enet's refreshed data demonstrated that it typically required a minimum of [§< [REDACTED]] for backhaul connectivity to its 'isolated' MANs which indicates that wireless technology is not capable of meeting these demands.

²⁹¹ Triple play services e.g. Standard and/or HD TV, Broadband and voice services

²⁹² It should be noted that Enet did not indicate in any of its responses to statutory information requests prior to the publication of the consultation that it was using Eircom for network extension for the purposes of backhaul.

4.83 Virgin Media also stated that in addition to the examples of Ratoath and Ashbourne mentioned above, and [§< [REDACTED] [REDACTED]]. It maintained that [§< [REDACTED]]²⁹³, and potentially [§< [REDACTED]] would be solely dependent on Eircom for backhaul. ComReg investigated these claims and found that [§< [REDACTED] [REDACTED]] dependent on Eircom for backhaul services.

Overall view on substitutability between wireless and wired MI WHQA

4.84 Having regard to the detailed analysis conducted since the 2016 Consultation and the above consideration of Respondents' views, ComReg has decided to amend its preliminary view as set out in the 2016 Consultation. In particular, ComReg is of further preliminary view that a sufficient number of Access Seekers purchasing wired WHQA products are unlikely to switch to wholesale wireless LLs in response to a 5-10% increase in the price of wired WHQA products, as a sufficient number of end-users would not view retail wireless LLs as an effective substitute to wired LLs. Wireless LLs are also unlikely to be a sufficiently effective substitute to wired WHQA products for Access Seekers that use WHQA products for own network inputs due to capacity constraints of wireless LLs. Furthermore, ComReg considers that P2P wireless technologies cannot provide sufficient capacities to meet the requirement for significant backhaul requirements from areas in which Eircom is the sole fixed SP with any infrastructure.

4.85 Thus, ComReg is of preliminary view that wholesale wireless LLs do not fall within the same product market definition as wired WHQA products. Nevertheless, ComReg considers any external competitive constraint imposed by suppliers of wireless LLs when carrying out competition analysis and assessment of SMP in Section 5 of this Further Consultation.²⁹⁴

Whether the Relevant WHQA Markets should include dark fibre services

4.86 ComReg disagrees with ALTO's, BT's and Eircom's views summarised in paragraphs 4.30 to 4.33 above that dark fibre services should be included within the scope of the Relevant WHQA Markets.

²⁹³ Virgin Media currently offers [§< [REDACTED] [REDACTED]].

²⁹⁴ See paragraphs 5.144 to 5.145 below for more details.

- 4.87 The substitutability between dark fibre services and LLs at the retail level was considered in detail in the 2016 Consultation²⁹⁵ and further in the context of the retail market assessment within this Further Consultation²⁹⁶. Based on this assessment, ComReg was and remains of the view that dark fibre sales to retail end-users do not pose a sufficiently effective indirect constraint in the WHQA Market to prevent a HM from imposing a profitable SSNIP in WHQA products.
- 4.88 In relation to substitutability between dark fibre services and LLs at the wholesale level, ComReg does not dispute Eircom's assertion that some SPs tend to purchase dark fibre and thus, dark fibre sales at the wholesale level are more pronounced compared to dark fibre sales at the retail level. In this regard, ComReg noted in the 2016 Consultation that several SPs supplying retail LLs (and purchasing or self-supplying) active WHQA products are also purchasing dark fibre from third parties²⁹⁷. However, ComReg remains of the view that dark fibre services are used by SPs as an upstream input for providing downstream wholesale LLs connecting end-user premises rather than a substitute per-se.
- 4.89 ComReg notes Eircom's comments regarding dark fibre's superior bandwidth scalability compared to WHQA products. While ComReg acknowledges that dark fibre allows Access Seekers more flexibility in terms of bandwidth and other product characteristics compared to active WHQA products, in the 2016 Consultation ComReg highlighted the fact that further time and investments from dark fibre purchasers are required before active WHQA products could be supplied using dark fibre inputs²⁹⁸. In ComReg's view these factors indicate that wholesale LLs might be preferred by Access Seekers when preparing their bids for end-users' tenders, because they reduce the amount of lead-time required for installation of services when used to provide downstream retail services.

²⁹⁵ The substitutability between dark fibre and LLs at the retail level was considered in paragraphs 4.90 to 4.97 of the 2016 Consultation and further in paragraphs 3.110 to 3.115 in Section 3 of this Further Consultation.

²⁹⁶ See paragraphs 3.110 to 3.116 of this Further Consultation.

²⁹⁷ See paragraph 5.71 of the 2016 Consultation.

²⁹⁸ See paragraph 5.70 of the 2016 Consultation.

- 4.90 ComReg notes that dark fibre sales volumes have continually remained less than one thousand by volume at the end of 2016 and for previous years.²⁹⁹ As such, ComReg maintains its preliminary view expressed in the 2016 Consultation that there is low likelihood of a sufficient number of wholesale LL purchasers switching to the purchase of dark fibre services in response to a SSNIP in WHQA products (such that the SSNIP would be unprofitable).
- 4.91 It is important to clarify however, that sales of WHQA products using third parties' commercially available dark fibre inputs are included in ComReg's market share analysis and treated in the same manner as WHQA products sold using 'own' passive access network infrastructure³⁰⁰. Thus, dark fibre sales to SPs for the provision of WHQA services were and continue to be indirectly taken into consideration in ComReg's competition analysis and assessment of SMP in the Relevant WHQA Markets.
- 4.92 ComReg does not agree with BT's and ALTO's views summarised in paragraphs 4.30 above that ComReg's treatment of dark fibre services in the 2016 Consultation was inconsistent with Ofcom's approach to the treatment of dark fibre services.
- 4.93 Firstly, ComReg notes that Ofcom has, to date, excluded dark fibre sold to end-users from the relevant wholesale product market definition due to limited substitutability between dark fibre and LLs at the retail level³⁰¹. ComReg has observed a similar situation in Ireland as indicated in paragraphs 3.51 to 3.56 of this Further Consultation.

²⁹⁹ SIRs issued April 2017 and previous years

³⁰⁰ ComReg also notes that dark fibre purchased by SPs and used for own network inputs purposes (e.g. self-supply of backhaul services) rather than sales of WHQA products, was excluded from market share analysis

³⁰¹ See paragraphs 4.277 to 4.309 of Ofcom's BCMR Decision. However, please note that the BCMR decision in relation to product market definition has been overturned by the Competition Appeals Tribunal. However, the definition was not overturned on this issue

- 4.94 Secondly, ComReg disagrees with BT's view that Ofcom's decision to mandate dark fibre can be interpreted as an acknowledgement that dark fibre is an effective substitute to wholesale LLs. ComReg notes that Ofcom has decided to impose access to dark fibre as a remedy alongside remedies concerning access to active wholesale LL products and not instead of it³⁰². In this regard, Ofcom explicitly stated³⁰³ that only when effective and sustainable competition based on passive remedies is established, could active remedies be withdrawn, thus, appearing to suggest that dark fibre is not yet regarded as an effective substitute for active WHQA products.³⁰⁴
- 4.95 Finally, contrary to ALTO's view summarised in paragraph 4.32 above, ComReg's decision to treat LLs sold using third party's passive access infrastructure (e.g. dark fibre) in the same way as LLs sold using own passive access infrastructure is consistent with Ofcom's approach on the treatment of on-net wholesale LL sales³⁰⁵. In particular, Ofcom's definition of on-net LLs included physical links leased from third parties (for example LLU and dark fibre), with this being a similar approach to that employed by ComReg.

³⁰² See paragraph 1.35 of Ofcom's BCMR Decision.

³⁰³ See paragraph 1.35.3 of Ofcom's BCMR Decision.

³⁰⁴ Again, please note that this Decision has been overturned by the Competition Appeals Tribunal

³⁰⁵ See Ofcom's interpretation of on-net wholesale LL sales in [Ofcom \(2015\), 'Business Connectivity Market Review – Review of competition in the provision of leased lines', consultation document, 15 May, Annex A15.26.](#)

- 4.96 ComReg notes ALTO's and BT's views that ComReg treated rented dark fibre infrastructure and in particular, MAN infrastructure as infrastructure owned by dark fibre Access Seekers. In the 2016 Consultation³⁰⁶ ComReg noted that State funded MAN infrastructure is publicly owned open wholesale access network. Enet, as the Management Services Entity ('MSE'), is required to sell all products on a fair, transparent, non-discriminatory basis to all Access Seekers. Thus, ComReg considered that in the absence of regulation in the MI WHQA Market (in the context of the MGA), Access Seekers' ability to purchase WHQA products from Enet would not be hampered. In the 2016 Consultation, in identifying a set of 209 Business Parks³⁰⁷ for the purpose of assessing the geographic scope of WHQA markets, ComReg examined the presence of independent physical networks. These 209 Business Parks were chosen on the basis that 2 alternative networks (networks other than Eircom's) were present and that these were independent of each other³⁰⁸ (or barriers to providing service within the park by both owners of networks was considered extremely low).
- 4.97 Furthermore, in the revised assessment of the geographic scope of the MI WHQA markets set out in Section 4.4.4 below, ComReg has used the presence of two alternative networks as a necessary (but not the sole) condition for a given area to be considered an area of dense Alternative Network Investment. As discussed in more detail in paragraph 4.178 below, in certain MAN locations whose services are only enabled having regard to Enet's purchase of backhaul services from Eircom, ComReg considers that - absent regulation - these MANs may become stranded if Eircom were to refuse access to its WHQA products. Hence, Enet may not be able to readily offer competing services to Eircom in these specific MAN areas.
- 4.98 In addition, Enet's own privately owned MAN and backhaul infrastructure (which is outside the scope of the State funded MAN networks) is not considered as an open access network. Enet is not bound by the principles of open access when selling products on its own network. Therefore, in areas where Enet's privately owned MAN infrastructure is present it is treated in a similar manner to other private SPs in the analysis.

³⁰⁶ See paragraph 3.23 of 2016 Consultation.

³⁰⁷ See Appendix 5 of the 2016 Consultation for a full list of Business Parks.

³⁰⁸ Although both networks could be based on dark fibre inputs purchased from Enet.

- 4.99 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that dark fibre products are unlikely to be a sufficiently effective substitute to wholesale LLs such that they would fall within the same product market.

Whether the Relevant WHQA Markets should include wholesale broadband services

- 4.100 ComReg disagrees with Eircom's view summarised in paragraph 4.34 above that wholesale broadband are substitutable with WHQA products to warrant their inclusion in the same product market.
- 4.101 The substitutability between business broadband services and LLs at the retail and wholesale level was considered in the 2016 Consultation³⁰⁹ and earlier within this Further Consultation in the context of the assessment of Respondents' views on the retail markets³¹⁰. In doing so, ComReg noted that there remains substantial differences in terms of product characteristics, pricing as well as intended use of these services by end-users.
- 4.102 Based on this assessment, ComReg maintains its view that, with the exception of EFM products³¹¹, wholesale business broadband products do not pose a sufficiently effective indirect constraint in the WHQA Market to prevent a HM from imposing a profitable SSNIP on WHQA products. The evidence available to ComReg suggests that business broadband services appear to be used by some retail LL users primarily in a complimentary fashion (typically as a back-up for primary LL connections).³¹²

³⁰⁹ The substitutability between business broadband services and LLs at the retail level was considered in paragraphs 4.9 to 4.57 of the 2016 Consultation whereas substitutability between these services at the wholesale level was considered in paragraphs 5.64 to 5.68 of the 2016 Consultation.

³¹⁰ See paragraphs 3.100 to 3.109 of this Further Consultation.

³¹¹ In the 2016 Consultation ComReg noted that EFM service exhibits characteristics that are similar to characteristics of retail LLs as well as from the end-user perspective. It was also noted that Magnet and Digiweb are providing EFM services at the wholesale level and therefore, ComReg considered that EFM is likely to be a part of the relevant WHQA product market (where these products are available).

³¹² See Paragraphs 4.122 to 4.126 of the 2016 Consultation.

- 4.103 In relation to substitutability between dark fibre services and wholesale LLs, ComReg was and remains of the view that there are substantial differences in terms of product characteristics, pricing as well as intended use of these services by Access Seekers. In the 2016 Consultation ComReg noted³¹³ Eircom's launch of VDSL Ethernet Access ('**VEA**') service³¹⁴ which offers higher service levels compared to other Bitstream or Virtually Unbundled Local Access ('**VULA**') services, but was of the view that it cannot match all of service characteristics supported by LL products such as bandwidth guarantees (irrespective of local access distance) and service availability. This difference in service characteristics was also reflected in the existing price gap between VEA and wholesale LL products.
- 4.104 Increasing demand for wholesale LLs (in spite of their high prices relative to prices of wholesale broadband services) also suggests that there is low likelihood of a sufficient number of wholesale LL purchasers switching to the purchase of wholesale broadband services in response to a SSNIP in WHQA products (such that the SSNIP would be unprofitable). In this regard, ComReg notes that at the end of 2016, the overall number of MI LLs in-situ was circa 10% more compared to the end of 2015.
- 4.105 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that wholesale broadband services, are unlikely to be a sufficiently effective substitute to wholesale LLs such that they would fall within the same product market.

³¹³ See paragraph 5.66 of the 2016 Consultation.

³¹⁴ VEA offers Ethernet services over an NGA connection to allow Access Seekers to access a customer premise from Eircom's regional Aggregation Nodes in a similar fashion to Bitstream services though with an individual VPN per connection. This service has not as yet gained significant volumes.

The existence of separate lower and higher bandwidth TI and MI WHQA markets given ComReg's chain of substitution analysis

- 4.106 ComReg disagrees with BT's view summarised in paragraph 4.35 above, that ComReg's chain of substitution analysis was inadequate and that there is a break in the chain of substitution at 1GB/s in the MI WHQA market. ComReg's starting point in analysing the boundaries of the MI WHQA market was the 2014 Recommendation and the Explanatory Note to the 2014 Recommendation, which sets out a broad market for high-quality access and explains that a chain of substitution may link services of different bandwidth and technology. Consistent with the SMP guidelines, ComReg applied the hypothetical monopolist test (HMT) framework and considered the key question to be assessed is whether there is a chain of substitution linking all MI WHQA services, or whether any breaks in the chain of substitution can be observed.³¹⁵
- 4.107 In relation to BT's assertion that SSNIP test was not applied to assess whether MI WHQA products of all bandwidths form part of the same product market, ComReg notes that an examination of WHQA products' pricing, alongside other evidence is considered at a qualitative level. This approach is typically used to assess the chain of substitution at different bandwidths and is consistent with the analysis applied by other NRAs³¹⁶. ComReg does not consider that applying quantitative SSNIP test is a practical method of assessing the chain of substitution between different LL bandwidths given the large number of potential bandwidths supported by LLs³¹⁷.

³¹⁵ The hypothetical monopolist test ('HMT') involves observing the response to a small but significant non transitory increase in price ('SSNIP') in the price of the focal product. If a significant number of customers switch to an alternative product, making the price increase unprofitable, then the alternative product is also included in the relevant product market. See Paragraph 4.8 of the 2016 Consultation for more details

³¹⁶ For example, see Ofcom's BCMR decision (referred to in footnote 160) and ACM's WHQA Market decision (referred to in footnote 182).

³¹⁷ In this regard, ComReg notes the General Court's view that SSNIP test is only one of the tools available for the purposes of defining the relevant market and might not be suitable in certain cases.. See paragraph 82 in [Judgment of the General Court \(Third Chamber\) Topps Europe Ltd v European Commission, Case T-699/14, 11 January 2017](#).

- 4.108 In the 2014 Market Research³¹⁸ a quantitative type SSNIP test was applied to assess whether, in response to a SSNIP, surveyed respondents would change their LL purchasing behaviour and if so, what action would likely be taken. Thus, the 2014 Market Research examined substitutability between various data connectivity services (including substitutability between LL and broadband services).
- 4.109 Furthermore, in considering the likely demand-side and supply-side responses to a SSNIP³¹⁹ ComReg highlighted a number of other factors that led to its preliminary view that MI WHQA LL products of all bandwidths fall within the same MI WHQA product market including:
- (a) homogeneity of end-user types purchasing LL of various bandwidths;
 - (b) relatively narrow cost differentials associated with supplying LL services of particular bandwidths; and
 - (c) relatively homogenous market share distribution, particularly when comparing market shares across Ethernet based WHQA LL product bandwidths up to 1Gb/s.
- 4.110 Thus, contrary to BT's view, the pricing analysis of MI WHQA products was considered alongside other available evidence that also indicated the existence of single MI WHQA product market including MI WHQA products of all bandwidths. In addition, it should be noted that ComReg's interviews with Multi-site retail LL customers provides some support the existence of single MI WHQA Market (in particular, 11 out of 17 interviewees indicated that they are likely to switch to higher bandwidth LLs in the next two to three years due to increasing data demands at their premises, the upgrading of ICT equipment and installation of new applications such as video conferencing³²⁰. As such, retail MI LL's of higher bandwidths are considered part of the same product market as lower bandwidth MI LL's).

³¹⁸ See slides 124 to 132 of the 2014 Market Research.

³¹⁹ See paragraphs 5.94 to 5.110 of the 2016 Consultation.

³²⁰ See paragraph A 5.14 Appendix: 4 of this Further Consultation.

- 4.111 ComReg does not dispute BT's assertion that some other NRAs have found a break in the chain of substitution between different bandwidths of LLs. In fact, the chain of substitution analysis led to ComReg's preliminary view that there is likely to be a 'break' in the chain of substitution for TI LL products with bandwidths above 2Mb/s displaying sufficient differences in terms of pricing and conditions of competition compared to TI LL services with bandwidths of up to and including 2Mb/s. However, the observed evidence referred to in paragraph 4.109 above, did not indicate the existence of separate MI WHQA Markets as distinguished by bandwidth.
- 4.112 In relation to BT's comment in paragraph 4.36 above that the identification of separate MI WHQA Markets would lead to a different outcome in terms of market share estimations, ComReg notes the relative homogeneity of market share distribution across Ethernet based WHQA LL product bandwidths up to 1Gb/s³²¹. Identification of a separate High Bandwidth MI WHQA market including all MI WHQA products above 1Gb/s, as suggested by BT, would not make a material difference on ComReg's analysis of competition and assessment of SMP in the MI WHQA Market either. MI WHQA products above 1Gb/s account for approximately 15% of all MI WHQA products, although ComReg acknowledges that there will likely be greater demand for such services in the future³²².
- 4.113 ComReg notes Enet's comments summarised in paragraph 4.38 above in relation to the chain of substitution analysis in the TI WHQA market and ComReg's preliminary view that there are two separate TI WHQA Markets. In the Consultation³²³ ComReg's analysis of Eircom's wholesale TDM circuits' pricing indicated a significant break in pricing for TDM circuits above 2Mb/s which led to ComReg's preliminary view that there is unlikely to be a common pricing constraint between TDM LLs of up to and including 2Mb/s and TDM circuits with bandwidth increments above 2Mb/s. In addition, it was noted that there are no intermediate products with bandwidths between 2Mb/s and 34 Mb/s and that Access Seekers are more likely to purchase an Ethernet based circuit if higher bandwidths are required. The conditions of competition in LB TI WHQA and HB TI WHQA Markets also appeared to be sufficiently different to warrant the identification of two separate TI WHQA Markets.

³²¹ See paragraph 5.106 and table 13 of the 2016 Consultation.

³²² In this regard ComReg notes Eircom's launch of 100Gb/s WEIL product in May 2017.

³²³ See paragraphs 5.155 to 5.168 of the 2016 Consultation.

- 4.114 ComReg does not agree that fibre-based TI and MI WHQA services should be within the same product market. ComReg notes that Enet did not substantiate its view by providing any material evidence that would show that fibre-based TI WHQA products are a sufficient substitute for MI WHQA. As stated in the 2016 Consultation³²⁴, factors such as pricing differences and switching costs when migrating between LL with different interfaces, suggest that these services are not likely to be effective substitutes at the wholesale level.
- 4.115 With respect to Enet's reference to the market definition proposed by the Malta Communications Authority (MCA), ComReg notes that the conditions of competition observed by MCA in its relevant WHQA market appear to be significantly different from those which can be observed in Ireland. In particular, MCA was of the view that there is a single WHQA product market irrespective of technology and its analysis of retail LL prices did not identify a significant break in pricing between different bandwidth products³²⁵.
- 4.116 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that TI WHQA products with bandwidths of up to and including 2Mb/s display sufficient differences in terms of pricing and conditions of competition in comparison to HB TI WHQA products and thus, the separation of TI WHQA Market into LB TI WHQA Market and HB TI WHQA Market is merited.
- 4.117 In relation to the MI WHQA Market, ComReg's preliminary position is that MI WHQA LL products of all bandwidths fall within the same MI WHQA product market.

ComReg's assessment of mobile backhaul services

- 4.118 ComReg does not agree with BT that self-supplied MI WHQA for the purposes of providing backhaul for mobile services are likely to be contestable. The example that BT uses of the RAN agreement between Meteor and Three has been overtaken by market developments. In particular, [REDACTED] has indicated that it has a small number of [REDACTED]³²⁶ shared with [REDACTED].

³²⁴ See paragraphs 5.72 to 5.81 of the 2016 Consultation.

³²⁵ See section 3.2.5 in [ACM \(2017\), 'High-quality access and connectivity services provided at a fixed location in Malta - MCA Decision on the definition of the relevant markets, assessment of competition and regulatory approach, including MCA comments to responses to consultation', 25 January.](#)

³²⁶ Less than 25 lines.

4.119 As such ComReg is of the view that these type of Network Sharing arrangements are of such a small scale that they do not materially alter ComReg's view in relation to the treatment of MI WHQA for the self-supply of Mobile Services.

4.4.2 Overall Preliminary Position on WHQA Product Market Definitions

4.120 Having regard to the analysis in the 2016 Consultation³²⁷ and the above consideration of Respondents' views, ComReg's preliminary position is that, with the exception of the removal of P2P radio links based MI WHQA LLS, the product markets remain unchanged. As such, there are three separate WHQA product markets:

- (a) Low Bandwidth Traditional Interface ('**TI**') WHQA Market consisting of all wholesale LLs carried over analogue, digital and TDM interfaces with speed of $\leq 2\text{Mb/s}$ (the '**Low Bandwidth (LB) TI WHQA Market**'); and
- (b) High Bandwidth TI WHQA Market which consists of all wholesale LLs provided over a TDM interface with speeds $> 2\text{Mb/s}$ (the '**High Bandwidth (HB) TI WHQA Product Market**'); and
- (c) Modern Interface ('**MI**') WHQA Market consisting of all wholesale LLs carried over interfaces such as Ethernet, EFM, xWDM and other such high bandwidth interfaces provided over wired media (the '**MI WHQA Product Market**').

4.121 The above product markets (together referred to as the '**Relevant WHQA Markets**') do not include wholesale wireless LLs due to the lack of effective demand supply and demand side substitutability between wired and wireless wholesale LLs. Nevertheless, ComReg considers any external competitive constraint posed by suppliers of wireless LLs when carrying out competition analysis and assessment of SMP in Section 5 of this Further Consultation.

4.122 Asymmetric wholesale business broadband services are not considered a substitute for a WHQA LLs due to the lack of effective supply and demand side substitutability between the products.

4.123 Passive infrastructure, such as Dark Fibre, is considered as an upstream input that can be used to supply retail and/or wholesale LLs, but not as an effective direct substitute for a wholesale LL.

³²⁷ See paragraphs 5.15 to 5.188 of the 2016 Consultation.

4.124 Eircom's and alternative SPs' self-supply is included in the Relevant WHQA Markets if these SPs are supplying WHQA products to Access Seekers.

4.4.3 Assessment of Respondents' Views on WHQA Geographic Market Definitions

Assessment of Respondents' Views on Geographic Scope of the Relevant TI WHQA Markets

4.125 ComReg notes that no Respondent disagreed with the geographic scope of the Relevant TI WHQA Markets. Thus, ComReg's preliminary position is that the Relevant TI WHQA product markets are national in scope as there are insufficient geographic differences in entry conditions over time and insufficient variations in the number and size of potential competitors or the distribution of market shares to be suggestive of separate geographic markets.

Assessment of Respondents' Views on Geographic Scope of the MI WHQA Market

4.126 Below, ComReg assesses Respondents' views on the geographic scope of the MI WHQA Market under each of the key themes identified in paragraph 4.43 above. Given the inter-relationship between these themes, ComReg considers them together in Section 4.4.4 below.

4.4.4 Further Assessment of the Geographic Scope of the MI WHQA Product Market(s)

Overview

4.127 In Section 3 above, ComReg further considered the geographic scope of the Relevant Retail Markets and set out its further preliminary view that each of the markets is likely to be national in their geographic scope.³²⁸ However, as detailed in Section 4.3 above, many Respondents disagreed with ComReg's preliminary view that the MI WHQA Market was national in scope.³²⁹

³²⁸ See paragraphs 3.156 to 3.158 above.

³²⁹ See Paragraph 5.236 of the 2016 Consultation.

- 4.128 In light of the above, and having regard to the availability of further granular information from SPs, ComReg has conducted a more in-depth analysis of the geographic scope of the MI WHQA Market. This involved mapping both the existing supply of and demand for MI WHQA LLs in the State.
- 4.129 ComReg has gathered detailed network mapping information from all SPs providing MI WHQA LLs and retail MI LLs³³⁰. It also gathered information from MI WHQA LL SPs and retail MI LL SPs on the geographic location premises connected to their networks, including SP's interconnection sites, data centres, as well as the geographic location of their retail and wholesale customers. ComReg has then used information from the Eircode database³³¹ and Google API Geocoding³³² to ascertain where businesses are located.
- 4.130 ComReg employed the consultancy firm TERA³³³ to analyse this SP provided information to assess where networks capable of supplying MI WHQA services are located in relation to current MI WHQA demand³³⁴ and also potential MI WHQA demand.³³⁵ TERA have prepared a report ('**TERA Report**') setting out the methodology it employed in conducting the mapping exercise, along with its findings, with a non-confidential version of this set out in Appendix: 1 of this Consultation.
- 4.131 ComReg has utilised this information in its assessment of the geographic scope of the MI WHQA Market throughout this Section and, having regard to the analysis outlined in Section 4.4.4 below, has formed the further preliminary view that there are likely to be two separate MI WHQA geographic markets in the State, namely:

³³⁰ By way of SIRs.

³³¹ Eircode is a database containing all physical addresses in the country. See <https://www.eircode.ie/what-is-eircode> for details.

³³² Google API Geocoding converts addresses into geographic coordinates. See <https://developers.google.com/maps/> for details.

³³³ <http://www.teraconsultants.fr/en/>. Tera also contracted Geocible to support it - <https://www.geocible.com/>.

³³⁴ By current MI WHQA demand ComReg is referring to the supply of MI WHQA services to existing End-Users.

³³⁵ ComReg used the On-net retail Sales of SPs to multi-site End Users and utilised the Eircode database to locate all of their premises – including the premises not connected using MI WHQA inputs. See paragraphs 4.206 to 4.210 below for more details.

- (a) Zone A MI WHQA Market (**'Zone A'**): Areas where there are multiple competing networks already supplying or readily capable of supplying MI WHQA LLs to the current and potential demand for those services; the conditions of competition within Zone A are likely to be sufficiently similar and distinguishable from other areas, in particular, Zone B below; and
- (b) Zone B MI WHQA Market (**'Zone B'**): Areas where there are limited or no competing networks capable of readily supplying MI WHQA. The conditions of competition within Zone B are likely to be sufficiently similar and distinguishable from other areas - in particular - Zone A.

4.132 The boundaries of these Zone A and Zone B areas is delineated by an aggregation of two separate groups of Small Areas (**'SA(s)'**)³³⁶, which have been chosen by ComReg as an appropriate geographic unit for the assessment of the conditions of competition.

4.133 This section is set out as follows;

- (a) First, we consider the framework and approach to the assessment of the geographic scope of the MI WHQA Market by considering the context within which this assessment is undertaken, including the choice of geographic unit for delineating the market boundaries; the supply and demand conditions that we consider in relation to the homogeneity assessment; and the mapping of the relevant supply and demand characteristics (discussed in paragraphs 4.134 to 4.137 below);
- (b) Second, we then assess the geographic scope of the MI WHQA market with reference to the framework that has been set out (discussed in paragraphs 4.138 to 4.229 below); and
- (c) Finally, we summarise our overall preliminary conclusions (discussed in paragraphs 4.230 to 4.231 below)

³³⁶ Small Areas have been developed by Ordnance Survey Ireland (**'OSI'**) for the Central Statistics Office (**'CSO'**). They are the smallest geographical unit used to organise Electoral Divisions. See <http://www.cso.ie/en/census/census2016reports/census2016smallareapopulationstatistics/> for more details.

Framework and Approach for the Assessment of Geographic Scope of the MI WHQA Market

4.134 Below, ComReg briefly describes the framework according to which it has carried out its assessment of the geographic scope of the MI WHQA Market.

4.135 The European Commission's Notice on Market Definition states that the relevant geographic market is:

*"...an area in which the Undertakings concerned are involved in the supply and demand of the relevant products or services, in which area the conditions of competition are similar or sufficiently homogeneous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different."*³³⁷

4.136 The European Commission's Notice on Market Definition notes further that it:

"...will take a preliminary view of the scope of the geographic market on the basis of broad indications as to the distribution of market shares between the parties and their competitors, as well as a preliminary analysis of pricing and price differences at national and Community or EEA level. This initial view is used basically as a working hypothesis to focus the Commission's enquiries for the purpose of arriving at a precise geographic market definition". ³³⁸

4.137 In assessing potential geographic variances in competitive conditions below, ComReg has also taken utmost account of the BEREC Common Position on Geographic Aspects of Market Analysis³³⁹.

The Context for the Geographic Market Assessment

4.138 In this section, ComReg

- (a) details the rationale behind its choice of geographic unit for assessing the boundaries of the geographic market (discussed in paragraphs 4.139 to 4.150 below);
- (b) sets out the reasoning behind the criteria that it has employed in assessing the conditions of competition in its overall assessment of the geographic scope of the MI WHQA Market (discussed in paragraphs 4.151 to 4.165 below); and

³³⁷ European Commission Notice on Market Definition, paragraph 8.

³³⁸ European Commission Notice on Market Definition, paragraph 28.

³³⁹ BEREC "[Common Position on Geographic Aspects of Market Analysis](#)", BoR (14) 73, 05.06.2014.

- (c) describes the mapping process that it has undertaken to analyse the relevant supply and demand criteria. (discussed in paragraphs 4.166 to 4.215 below).

The Choice of Geographic Unit and the Geographic Assessment Criteria

- 4.139 Below, ComReg describes the approach according to which it has chosen SAs as the geographic unit within which to analyse the conditions of competition within the MI WHQA Market (discussed in 4.141 to 4.150 below).
- 4.140 ComReg then sets out the reasons for the choice of the criteria that it uses, alongside other factors, to consider the homogeneity (or otherwise) of competitive conditions within the chosen geographic unit. In doing so ComReg discusses:
- (a) the presence of Alternative Networks (**‘AN(s)’**)³⁴⁰ capable of supplying terminating segments of MI WQHA and (discussed in paragraphs 4.151 to 4.165 below); and
 - (b) considerations regarding those networks’ ability to readily meet either current and/or potential demand for MI WHQA LLs in SAs (discussed in paragraphs 4.166 to 0 below).

Choice of Geographic Unit

- 4.141 The Explanatory Note to the 2014 Recommendation states the following in relation to the choice of geographic unit to be used for a geographic market assessment:

*“.....NRA’s should ensure that these units are (a) of an appropriate size, i.e. small enough to avoid significant variations in competitive conditions within each unit but yet big enough to avoid a resource intensive and burdensome micro-analysis that could lead to a fragmentation of markets, (b) able to reflect the network structure of all relevant operators and (c) have clear and stable boundaries over time.”*³⁴¹

- 4.142 ComReg has considered a number of candidate geographic units including streets, SAs, Electoral Districts (**‘ED(s)’**), Local Authority Administrative Areas (**‘LAAA(s)’**) and Counties. However, ComReg has formed the view that the Small Area was the most suitable unit to use to undertake this geographic analysis.³⁴²

³⁴⁰ These are networks other than Eircom, capable of supplying MI WHQA LLs.

³⁴¹ Section 2.5, page 16 of the Explanatory Note to the 2014 Recommendation.

³⁴² See Section 2.4 of the TERA Report.

- 4.143 Although streets would be of sufficient granularity to provide the requisite detail, their boundaries can sometimes be ill-defined and difficult to map precisely as stable units. For instance, many roads and streets have alternative names, and some can be of varying lengths that mean that arriving at a stable boundary or applicable length can be difficult.³⁴³
- 4.144 Conversely, although, EDs, LAAs and County boundaries are relatively stable, they are, in ComReg's view, considered to be too large to satisfy the ability to appropriately assess the homogeneity (or otherwise) of competitive conditions between different geographic areas as there can be large differences in network coverage within them. Similarly, ComReg had these concerns in relation to the Eircom exchanges areas as being too large.
- 4.145 ComReg notes that the use of a geographic unit as small as SAs may result in an absence of contiguity between adjacent SAs. However, ComReg considers that the identification of the competitive conditions at such a granular level leads to our competition assessment being robust and this benefit outweighs the fact that adjacent SAs can be part of separate markets and thus the geographic markets seem fragmented.
- 4.146 As such, ComReg is of the view that SAs are a suitable candidate unit as they meet the criterion set out in paragraph 4.141 above.
- 4.147 In this respect, ComReg notes that there are 18,641 SAs in the State, and they are the smallest geographic unit used by the CSO to develop EDs. The CSO notes that:

*"Small Areas are areas of population comprising between 50 and 200 dwellings created by The National Institute of Regional and Spatial Analysis (NIRSA) on behalf of the Ordnance Survey Ireland(OSI) in consultation with CSO. Small Areas were designed as the lowest level of geography for the compilation of statistics in line with data protection and generally comprise either complete or part of townlands or neighbourhoods. There is a constraint on Small Areas that they must nest within Electoral Division boundaries."*³⁴⁴

³⁴³ Ibid

³⁴⁴ <http://www.cso.ie/en/census/census2011boundaryfiles/>

- 4.148 In its geographic assessment, ComReg has used the CSO's 'Ungeneralised Small Area' map, as it is the highest resolution available and is accurate to 1m². ComReg also notes that the 2011 Census Small Areas have been used by ComReg in its analysis given this was the most up-to-date version available at the time the geographic analysis was conducted. ComReg has recently become aware that the CSO has since updated the SA boundaries using the information from the 2016 census. ComReg will examine the use of the updated 2016 Census SAs to support its analysis in the final decision arising from this Further Consultation³⁴⁵. As these Small Areas will be in place until the 2021 census they will be stable for the whole of the review period.
- 4.149 Figure 7 below gives a graphical representation of the Small Areas in Ireland, with Figure 8 showing the Small Areas in the Dublin region.

³⁴⁵ <http://www.cso.ie/en/census/census2016reports/census2016boundaryfiles/>.

Figure 7: Graphical representation of Small Areas in Ireland

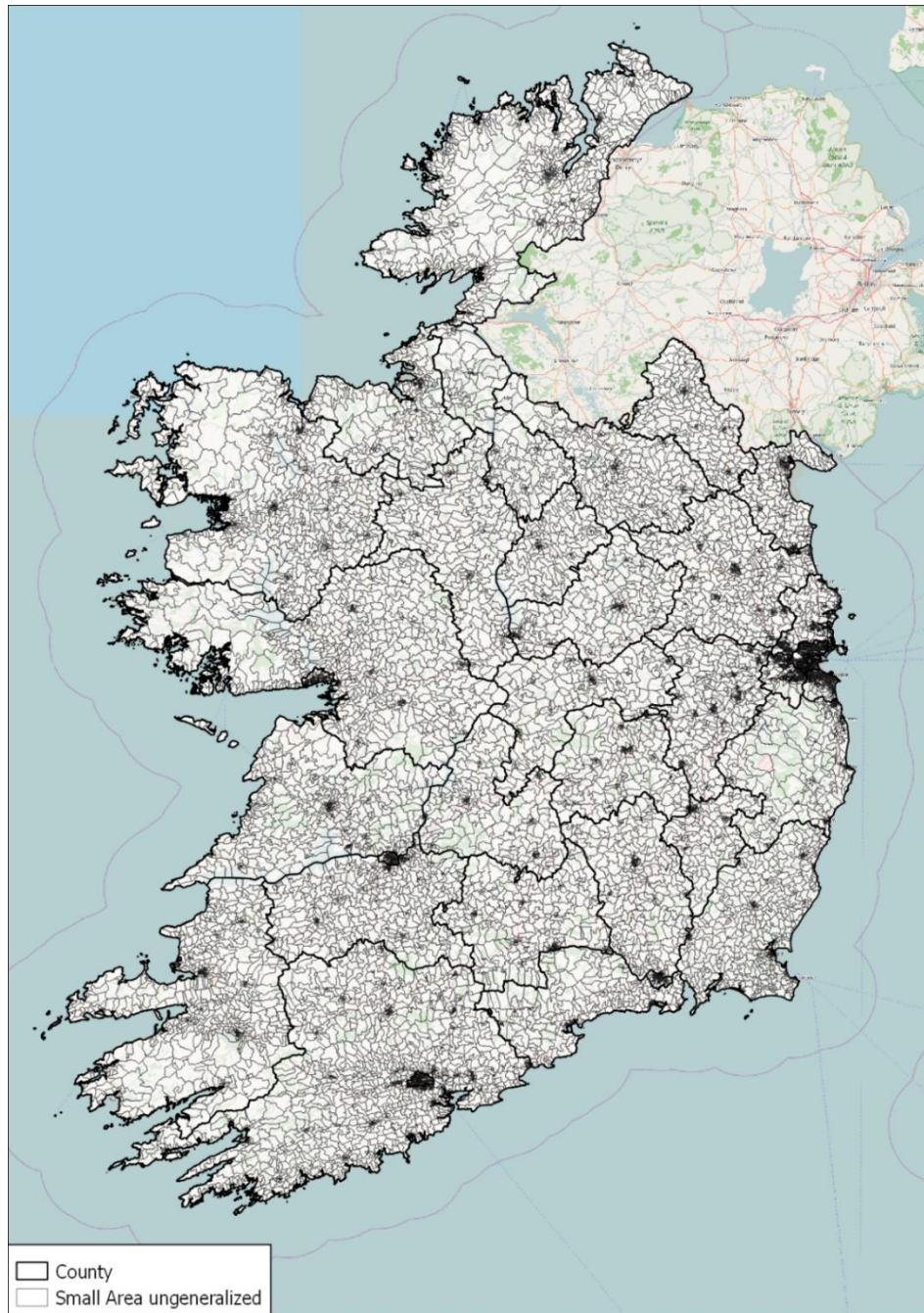
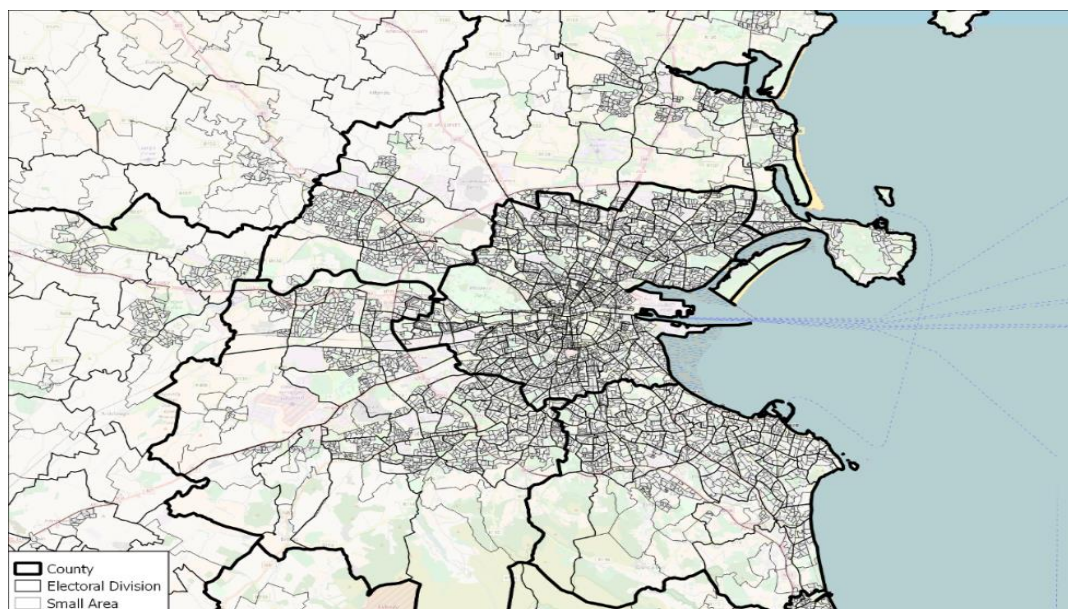


Figure 8: Graphical Representation of Small Areas within Dublin



4.150 For the reasons outlined above, ComReg is of the view that SAs are an appropriate choice of geographical unit for its assessment of the geographic scope of the MI WHQA Market.

Criteria for Assessing Conditions of Competition

4.151 Below, ComReg sets out its rationale for the choice of the two criteria it has employed in assessing the conditions of competition within SAs. These criteria are as follows:

- (a) **Criterion 1:** A SA has two or more ANs present (in addition to Eircom); and
- (b) **Criterion 2:** 75% of current or potential demand must be within 100 meters of two or more ANs.

Criterion 1: SA has two or more alternative networks ('AN's) in or touching it³⁴⁶

4.152 The BEREC Common Position on Geographic Aspects of Market Analysis states, in relation to the criteria for assessing the homogeneity of competitive conditions, that:

³⁴⁶ With the exception of publicly owned MANs. See paragraph 4.157 for details.

“In the case of markets...such as terminating segments of leased lines, where network investments tend to be incremental, some form of network reach analysis which requires assumptions to be made about build-or-buy decisions may be more appropriate to identify the number of operators”³⁴⁷

- 4.153 ComReg describes below how it has mapped all the ANs capable of supplying MI WHQA services in the State, and identified how many such ANs were present in or at each SA.
- 4.154 ComReg has not mapped the Eircom network as it is of the view that due to its extensive duct and pole network, it is considered to have a ubiquitous presence in every SA. As such, it can reach most premises in the State within a reasonable timeframe.
- 4.155 The greater the number of competing SPs in a SA, the more likely is the potential for there to be differences in competitive conditions. However, this needs to be considered alongside other criteria (such as market share distributions over time). Where a SA has two or more competing ANs present that either are - or could potentially be - used to provide terminating segments of MI WHQA (in addition to Eircom³⁴⁸), or where a SA has a publically owned MAN that has backhaul connectivity independent of Eircom, ComReg considers that the SA is likely to have a sufficient AN presence such that it is suggestive that competitive conditions could potentially be sufficiently different from SAs where there is only one or no AN network present.
- 4.156 Furthermore, the presence of two or more ANs has formed the basis for the geographic assessment of Market 3b – Wholesale Central Access³⁴⁹ and the current demarcation of the Trunk/Terminating boundary for Wholesale Leased Lines.³⁵⁰

³⁴⁷ Paragraph 109 BEREC “[Common Position on Geographic Aspects of Market Analysis](#)”, BoR (14) 73, 05.06.2014.

³⁴⁸ Note that as set out in paragraph 4.171 above, ComReg considered Eircom to have the ability to reach most locations and therefore, in effect, we considered that there are three networks present under this criterion of 2 ANs being present.

³⁴⁹ See <https://www.comreg.ie/publication/market-reviews-wholesale-local-access-wholesale-central-access-non-confidential-responses-received-comreg-document-1696/> for details.

³⁵⁰ See 2008 Decision for details.

4.157 Please also note that SAs with publically owned MANs are treated as having similar competitive conditions to SAs that have two or more MANs as such network infrastructure is available under regulated access and pricing conditions. As such, any licenced electronic communications provider can access the publicly owned MANs at or below published prices.³⁵¹ In ComReg's further preliminary view, this means that the competitive conditions in such SAs are more akin to SAs with two or more ANs than to those with one or less privately controlled ANs.

Criterion 2: Distance and proportionality criteria

Overview

4.158 ComReg has considered how close to ANs that the majority of relevant premises³⁵² in a Small Area would need to be in order for the demand (both actual and potential) in that SA to be capable of being supplied by such an AN. In doing so, ComReg has considered both a distance criterion and a proportion of relevant premises criterion. These are explained below.

Distance Criterion

4.159 ComReg ascertained the radial distance of relevant premises to the networks present in a small area. The distances considered were 50, 100 and 200 metres. In order to choose the most reasonable distance, ComReg contacted a number of Local Authorities seeking information on their processes for wayleave applications and corresponding notification periods for various dig distances.³⁵³ In the DCC area a 3 month notification period is required for effective excavation distances greater than 100 linear metres. For distances less than this, the notification period is 7 days. It should also be noted that DCC appear to apply the most regulated and automated rules for road opening applications compared to other LAs. Having examined all of the evidence gathered, ComReg formed the preliminary view that a SP can access customer site in a reasonable timeframe³⁵⁴ when its network infrastructure is within 100 metres of the relevant premises.

³⁵¹ See <https://www.dccae.gov.ie/en-ie/communications/topics/Broadband/metropolitan-area-networks/Pages/Metropolitan-Area-Networks.aspx> for more details.

³⁵² A 'relevant premise' is a premise that is either currently connected by MI WHQA or a premise that is being used as a proxy for future demand. Please see 4.203 to 4.210 below for more details.

³⁵³ ComReg contacted 5 local authorities: the 4 Dublin local authorities (Dublin City Council, South Dublin Co. Co., Dun Laoghaire Rathdown Co. Co. and Fingal Co. Co.) and Cork County Council.

³⁵⁴ Such as those stipulated by retail users.

4.160 Therefore, 100 metres was adopted as the criteria for the “premises to network distance” in the algorithm finally applied to calculate the areas of high infrastructure competition. Furthermore, the option of using Eircom’s wholesale passive access products are also available to SPs to gain access to customer premises³⁵⁵ and these could be used to significantly reduce the requirement for major civil engineering activity.

Proportionality Criterion

4.161 ComReg then considered what proportion of relevant premises should meet the distance criterion in a SA such that it could be considered that the conditions of competition in that SA could be suggestive, when considered alongside other factors, sufficiently homogenous. Three proportions were considered, namely; 50%, 75% and 90% of relevant premises in a SA.

4.162 75% was the proportion chosen as it was considered to be most reasonable. Were 50% to be chosen, there could be many instances when a large number of relevant premises were much further than 100 metres from alternative networks. This has the potential to overstate the actual homogeneity of competitive conditions in this SA.

4.163 Conversely, if 90% was chosen, the presence of only one relevant premise outside the distance criterion would mean that a SA could be considered more heterogeneous in its competitive conditions than is actually the case (having regard to the size of the SAs and the number of businesses within them).

4.164 For the reasons set out in paragraphs 4.151 to 4.165 above, ComReg’s preliminary view is that one criteria to determine whether it is suggestive that a SA has sufficiently homogenous conditions of competition is that 75% of all relevant premises must be within 100 metres of ANs.

Overall Preliminary Conclusions on the Choice of Geographic Unit and the Geographic Assessment Criteria

4.165 Having regard to the analysis in paragraphs 4.138 to 4.164 above, ComReg’s preliminary view is that:

- (a) SAs are an appropriate geographic unit for the MI WHWA geographic market assessment; and
- (b) In assessing the conditions of competition present within SAs, ComReg examines whether:

³⁵⁵ Duct and Pole Access Reference Offers.

- (iii) 2 or more ANs are present in the SAs (these are in addition to Eircom which is assumed to have a ubiquitous network by virtue of its poles and ducts which constitute its national local access network), and
- (iv) 75% of all relevant premises are within 100 metres of ANs.

Mapping Process

4.166 In this section, ComReg sets out its methodology it has employed in mapping the supply and demand conditions in SAs according to the geographic assessment criteria set out above.

4.167 Firstly, ComReg describes the process of mapping the locations of networks capable of supplying MI WHQA services. Secondly, ComReg details the methodology employed in mapping the locations of premises that either are currently connected and supplied with MI WHQA services (current demand) and/or the locations of premises that could potentially demand MI WHQA services within the timeframe of this market assessment (Potential Demand). Such premises are collectively referred to as 'Relevant Premises'.

4.168 In summary, ComReg:

- (a) Mapped the presence of ANs within SAs (discussed in 4.169 to 4.184 below);
- (b) ascertained the level of Current Demand for MI WHQA LLs by mapping the end-user premises that an SP is connected to and is currently providing MI WHQA services. Furthermore, in order to consider the extent to which SPs can meet this demand in particular SAs, ComReg calculates the distance from these currently served premises to all AN infrastructure that is used to provide MI WHQA services; (discussed in paragraphs 4.185 to 4.186 below); and
- (c) used Eircode³⁵⁶ premises address information to identify the locations of the largest multi-site retail LL customers and then calculates the distance from these premises to SPs' MI WHQA network infrastructure (discussed in paragraphs 4.187 to 4.189 below).

³⁵⁶ Eircode provides the geographic location of every building in the State. Further details are provided in the TERA Report, page 3.

Mapping of Networks

- 4.169 As stated in paragraph 4.130 above, ComReg employed TERA which provided the analytical support to undertake the mapping exercise in support of ComReg's assessment of the geographic scope of the MI WHQA Market. A non-confidential version of the TERA Report is set out in Appendix: 1
- 4.170 ComReg has overlaid the fixed wired networks of ANs providing MI WHQA services onto SA map referred to in Figure 7 above. In this respect, ComReg has mapped³⁵⁷ the networks of the following SPs:
- (a) Aurora;
 - (b) BT;
 - (c) Colt;
 - (d) Enet;
 - (e) ESBT;
 - (f) EU Networks;
 - (g) GTT;
 - (h) Magnet;
 - (i) Siro;
 - (j) Verizon;
 - (k) Viatel;
 - (l) Virgin Media; and
 - (m) Vodafone.
- 4.171 As noted above, for the purposes of this exercise, Eircom was considered by ComReg to have a network presence in all Small Areas due to its effectively ubiquitous access network and its ability to reach most premises in a relatively short timeframe. Therefore, the Eircom network was not actually mapped but their presence is taken into consideration in the analysis.
- 4.172 In order to account for differences, at a finite level, (in the accuracy of the maps supplied by SPs), in conducting the mapping exercise ComReg has extended the 'thickness' of SPs network routes, in width terms, to 20 meters. As stated in the TERA Report,

³⁵⁷ See Section 2.1 of the TERA Report for more details on the precise mapping methodology.

*“Some maps were offset slightly from the carriageway on which they were run but still clearly indicated the streets and roads through which the relevant networks were routed. It was not feasible to distinguish which side of the carriageway the duct was on or if it was routed along the centre of the road or on the footway. For this reason, each network was allocated a “thickness” or effective width of 20 Metres”*³⁵⁸

- 4.173 These network maps were then refined to remove SPs’ core network elements, as ComReg considers that it is unlikely that local network access break-out from those locations is possible. For example, core networks that are routed along mainline railways, high-tension electricity pylons or co-located with high pressure cross-country gas pipes typically cannot facilitate break-out locations from which MI WHQA LLs or retail MI LL services could be provided.³⁵⁹
- 4.174 However, it should also be noted that such core network elements were taken into account when considering whether local access networks had access to backhaul services, absent regulation, and so offered a fully independent alternative to Eircom’s local access services or whether local access networks were effectively stranded islands of fibre which were dependent on Eircom for backhaul services and could not likely support MI WHQA services, absent regulation.³⁶⁰
- 4.175 Furthermore, in conducting the mapping exercise, Virgin Media’s network information was provided in the form of polygons where its network is dense, and these were used by ComReg in mapping the location of its network. In particular, these Virgin Media network polygons were overlaid against the SA polygons to map Virgin Media’s network coverage.³⁶¹

³⁵⁸ Section 3.2; TERA Report.

³⁵⁹ Section 2.1; TERA Report.

³⁶⁰ This is referred to below in paragraph 4.170 specifically in relation to some portions of local access network of both Virgin Media and Enet.

³⁶¹ Section 2.1 TERA Report.

- 4.176 Moreover, in conducting the mapping exercise, distinctions were made by ComReg with respect to Enet's network elements based on differences in supply conditions. This is because, as noted in 4.82 above, Enet is the MSE that manages the publicly owned MANs. Specific access conditions are attached to these networks whereby Enet must provide access under certain terms and conditions such, as non-discriminatory access and maximum prices.³⁶² However, some of these MAN's are wholly reliant on Eircom for backhaul which is provided pursuant to existing regulation under the 2008 Decision. In accordance with the MGA, absent regulation ComReg treats such Eircom supplied backhaul as being unavailable, and, therefore, MI WHQA services would not be available from such MANS.
- 4.177 Also, given access to publicly owned MANs is, arising from State aid conditions, subject to non-discrimination and maximum pricing obligations, the presence of an SP purchasing MI WHQA from Enet on these MANs ComReg has treated that particular MAN as having two ANs as effectively being present.
- 4.178 Finally, as noted in paragraph 4.155 above Enet also controls network elements that are privately owned and so are not subject to the State aid obligations that apply to the State owned MANs. In view of this, Enet network maps were divided into the following three distinct network types.
- (a) 'ENET CMAN' – State owned open access network with alternative backhaul available;
 - (b) 'ENET UMAN' – State owned open network access network which are partially or wholly dependent on Eircom for backhaul; and
 - (c) 'ENET Other' – the privately owned portions of the Enet network.

Mapping of Demand - 'Relevant' Premises

- 4.179 Below ComReg details its approach to mapping the location of the Current Demand and Potential Demand for MI WHQA LLs in the State. In summary, ComReg asked SPs to provide the location of premises that are currently connected by MI WHQA LLs with this being Current Demand.

³⁶² See paragraph 4.82 for more details

- 4.180 However, as this market assessment must be forward looking, ComReg also considers it appropriate to look at future demand as well as current demand. Furthermore, as many SAs have no current demand but have ANs present³⁶³, ComReg considers it appropriate to ascertain the ability of these ANs to provide MI WHQA to potential demand in those SAs. It should be noted from the outset that it was only where there was insufficient Current Demand in an SA, that potential demand was considered as a proxy for conditions of competition.
- 4.181 In assessing Potential Demand, ComReg has identified the location of all of premises of the multi-site customers of SPs retail MI LLs, including those premises not currently connected by MI WHQA. ComReg is of the view that as retail connectivity needs increase in terms of bandwidth and services over time, such premises are likely to demand services using MI WHQA inputs. As such, all the locations of the premises of such retail customers is used as a proxy for potential demand for MI WHQA (for the duration of this market review period).
- 4.182 Together these locations of Current Demand and Potential Demand are considered to be the 'relevant premises' for the assessment of the demand for MI WHQA.

Current Demand

- 4.183 In response to an April 2016 SIR³⁶⁴, SPs provided a list of premises connected with MI LLs (both wired and wireless).³⁶⁵ TERA, used this information to ascertain the location of premises connected by wired MI WHQA as detailed in Section 2.3 of the TERA Report. Following data cleansing, this resulted in the identification of 9,625 premises locations connected by wired MI WHQA. These are identified in Table 10 below. In cleaning the data, duplicates were removed³⁶⁶ and premises that could not located were disregarded.³⁶⁷

³⁶³ 465 SAs have current demand

³⁶⁴ Issued 12 April 2017 for data pertaining to end of year 2016 ('**April 2016 SIR**').

³⁶⁵ For reasons set out in 4.65 to 4.85 above, wireless MI WHQA is considered to be outside the scope of the product market definition

³⁶⁶ Duplicated inputs refers to premises that appear more than once in a particular SPs information.

³⁶⁷ See Section 2.3 of the TERA Report for more details.

Table 10: Current Volumes of Wired Premises served by SPs [PARTIALLY REDACTED]

Service Provider	Premises served by Fixed Network
Airspeed	[REDACTED]
BT	[REDACTED]
COLT	[REDACTED]
EIRCOM RETAIL	[REDACTED]
EIRCOM WHOLESALE	[REDACTED]
ENET CMAN	[REDACTED]
ENET UMAN	[REDACTED]
ENET OTHER	[REDACTED]
ESBT	[REDACTED]
EU Network	[REDACTED]
GTT	[REDACTED]
Magnet	[REDACTED]
Verizon	[REDACTED]
Viatel	[REDACTED]
Virgin Media	[REDACTED]
Vodafone	[REDACTED]
Total	9,625

Potential Demand

- 4.184 As detailed in Section 2.2 of the TERA Report, ComReg utilised the information on the Eircode address database to ascertain the location of premises that ComReg considers may potentially demand services that utilise MI WHQA over the period of this market analysis.³⁶⁸
- 4.185 In order to ascertain a premises that may demand retail LL services requiring MI WHQA over the review period, ComReg utilised information available in the Eircode database which is summarised in Table 11 below.

³⁶⁸ This also includes the premises of Current Demand but limited to SA where Current Demand is not present.

Table 11: Count of Eircode Address Points ³⁶⁹

Objects	Count
Buildings ³⁷⁰	1,909,884
Address points ³⁷¹	2,161,405
Non-residential	178,129
Residential	1,893,088
Mixed ³⁷²	90,188
Postal addresses ³⁷³	2,197,699
Organisations ³⁷⁴	309,911

- 4.186 ComReg first considered using the non-residential, and/or organisations objects when considered potential demand. However, both of these categories contain many organisations that are not likely to purchase MI WHQA during the market review period as many would be sole traders and/or SME's. As such, a subset of these categorises was considered more appropriate.
- 4.187 When considering an appropriate subset, ComReg took into consideration the Submissions which highlighted the issue of access to MI WHQA to fulfil multi-site retail contracts. Furthermore, ComReg considered that multi-site retail customers that currently purchase retail MI LLs for some of their premises, may decide to purchase retail MI LLs for premises that are currently using other connectivity services such as Business Broadband.

³⁶⁹ See Section 2.2 of the TERA Report for more details.

³⁷⁰ A building may be an apartment building (having several address points) or a house (having one single address point).

³⁷¹ An address point record exists for every unique address within a building. A standard residential property will have one address point. Apartment buildings and multi-unit commercial buildings will have one address point for every unique address within the building. *Source: Eircode Documentation.*

³⁷² This is a special case where the residential and non-residential addresses in the building are essentially the same address. The typical example is a farm house on an active farm. *Source: Eircode Documentation.*

³⁷³ An address point may have several postal addresses.

³⁷⁴ The ORGANISATION table contains a record for every non-residential address. *Source: Eircode Documentation.*

4.188 To this end, ComReg considered the information provided by SPs in response to the April 2016 SIR, with this setting out, amongst other things, details of their retail customers that are provided with MI WHQA LLs on their own network. ComReg then took this list of customers and searched the 'Organisations' objects in the Eircode database. This returned 15,488 results. These 15,448 premises were considered to be a proxy for Potential Demand for MI WHQA. This subset of the Organisation category of the Eircode database is referred to as '**Potential Demand Organisations**'.³⁷⁵

Relevant Premises

4.189 In summary, having regard to the analysis in paragraphs 4.179 to 4.188 above, ComReg considers that the locations of premises of Current Demand and Potential Demand are together considered the 'relevant premises' for assessing the Geographic scope of the MI WHQA market.

Assessment of the Geographic Scope of the MI WHQA Product Market

4.190 Having regard to the above, ComReg assesses the geographic scope of the MI WHQA Market according to the following criteria:

- (a) Geographic differences in entry conditions over time;
- (b) Variation in the number and size of potential competitors;
- (c) Distribution of market shares;
- (d) Evidence of differentiated pricing or marketing strategies; and
- (e) Geographical differences in demand characteristics.

4.191 However, as the mapping process described above explicitly links the geographic differences in entry conditions and the geographical differences in demand characteristics and variation in the number and size of competitors, these criteria are dealt with jointly in the following subsection.

³⁷⁵ See paragraphs 4.179 to 4.181 above for more details.

Geographic differences in entry conditions and demand characteristics, and variation in the number and size of potential competitors

Overview

4.192 In examining the extent of any differences in entry conditions and demand characteristics, as well as variations in the number and size of potential competitors, ComReg (with the assistance of TERA) has carried out the mapping exercise at the SA level cumulatively applying the criteria described in paragraph 4.138 to 4.229 above, namely .

(a) **Criterion 1:** ComReg identifies whether an SA has two or more ANs present within in it (discussed in paragraphs 4.197 to 4.200 below),

and either

(b) **Criterion 2a:** ComReg identifies whether the majority³⁷⁶ of Current Demand within a SA (as measured by premises connected with active MI WHQA LLs) is within 100 metres of two or more ANs (discussed in paragraphs 4.201 to 4.202 below); **or**

(c) **Criterion 2b:** ComReg identifies whether the majority of Potential Demand (as measured by Potential Demand Organisations) is within 100 metres of two or more ANs (discussed in paragraphs 4.203 to 4.208 below).

4.193 For example, if the above criteria are met in one SA or group of SAs, it suggests that within such areas there are multiple competing networks that are already or are reasonably capable of supplying MI WHQA LLs to the Current Demand and Potential Demand for those services.

4.194 Alternatively, if these criteria are not met, the opposite is true.

4.195 For those SAs that meet the above criteria relative to those SAs that do not, it is suggestive that there may be sufficient differences in competitive conditions to warrant the delineation of different geographic markets.

³⁷⁶ By majority we mean equal to or greater than 75%.

- 4.196 Eircom offers MI WHQA products across its largely ubiquitous network and Access Seekers can purchase MI WHQA inputs in most locations.³⁷⁷ In relation to MI WHQA services supplied over ANs, as noted in A 6.11 and Figure 20 in Appendix 6, since the 2008 Decision there is evidence of increased availability of MI WHQA and retail MI LL products being offered via alternative wired networks. This includes MI WHQA services being offered via the development of the 88 State owned MANs which have provided fibre networks to 94 urban areas within the State, although a number of these MANs are dependent on Eircom for backhaul.³⁷⁸
- 4.197 The presence of alternative networks has increased particularly in areas of high business activity, such as Business Parks³⁷⁹ and Data Centres³⁸⁰, 3rd level education campuses³⁸¹ and also in urban areas such as city and town centres. In these areas, network infrastructure has been increased given that demand for retail MI LL services is likely to be more concentrated. As such, ComReg has assessed if there may be certain geographic areas within which entry conditions for the supply of MI WHQA products are lower and/or where entry barriers appear have been overcome (as indicated by the presence of Alternative Networks).

Assessment of the Criteria

Assessment of Criteria 1: SA has two or more ANs touching it

- 4.198 The assessment of this first criterion, through the mapping exercise, has led to the identification of the SA shaded green in Figure 9 below, being candidate SA potentially showing sufficiently different conditions of competition relative to other SAs.³⁸² Of the 18,641 SAs in the State, 4,752 SA meet this first criterion.

³⁷⁷ We note that [redacted].

³⁷⁸ See paragraph 4.54 above.

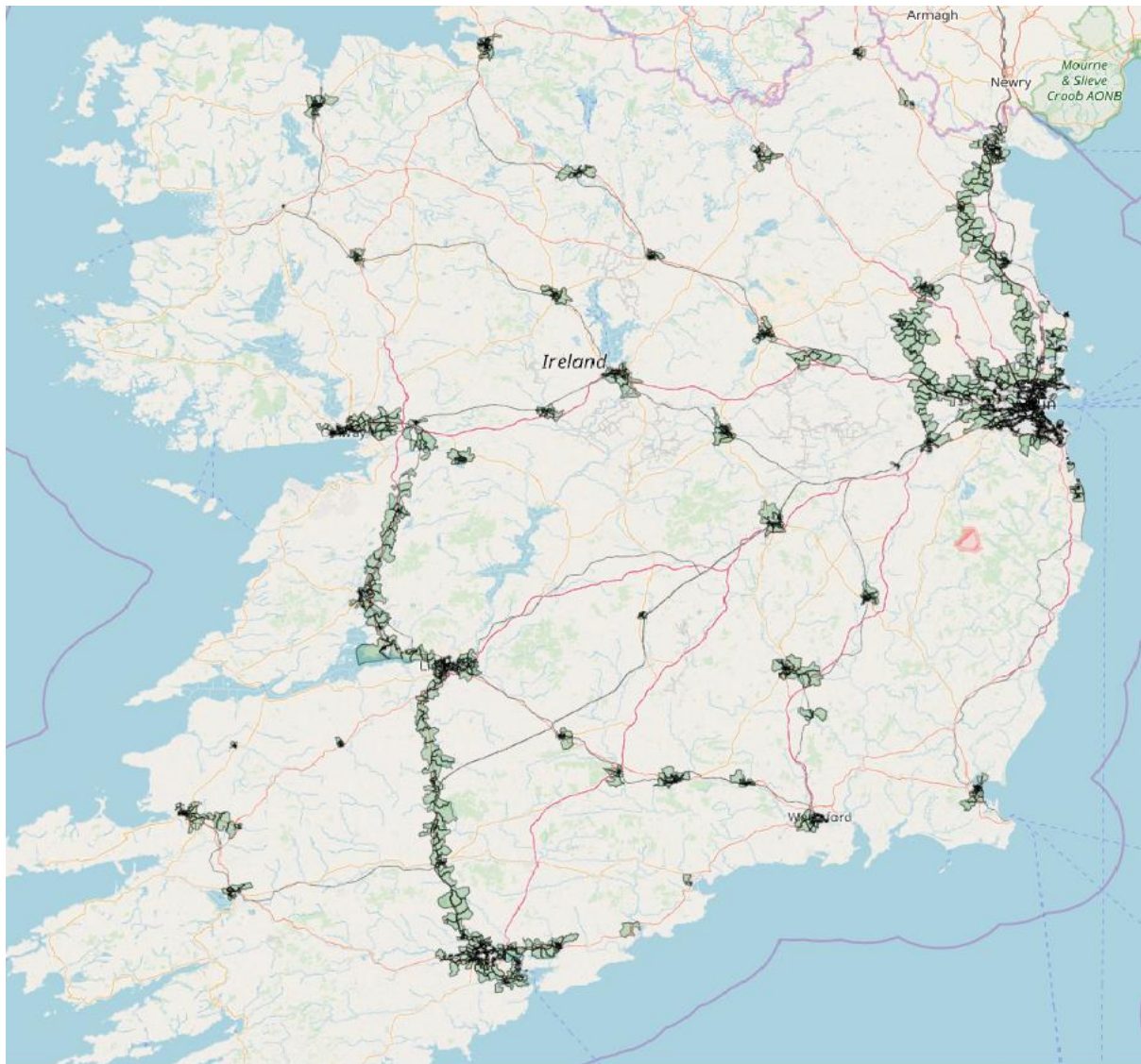
³⁷⁹ Business Parks are sites that contain clusters of typically commercial businesses. They tend to be located in suburban areas and near to main roads. As these tend to group similar types of end-user demand (i.e. corporate or IT specific firms) in one location, the costs for operators connecting to these sites are lower compared to areas where end-user premises are more dispersed.

³⁸⁰ Data Centres, in the broadest sense, are premises whose main purpose is to house computing and communications equipment in secure locations and which therefore require very high capacity LL as well as dark fibre to carry data to and from their facilities.

³⁸¹ See Appendix: 8 of the 2016 Consultation for a full list of Business Parks.

³⁸² See Section 3.2 of the TERA Report for more details.

Figure 9: Small Areas meeting Criterion 1



- 4.199 As can be seen in Figure 9 above, the SAs that meet the first criterion are generally located in the more urban towns and districts where commercial activity (where a higher likelihood of demand for LLs) is relatively more intense.³⁸³ It should be further noted that there are 4 corridors of SAs running south to north located in the south west and north east. These are SAs where the networks located along carriage ways. ComReg is of the view that it is possible to readily use these networks for the provision of MI WHQA. This is in contrast to the networks that are located along railways where break out is only allowed at designated locations.
- 4.200 Furthermore, as detailed in Table 12 below, the SAs that meet the first criterion are generally smaller than those that don't. It is also noteworthy that the majority of SAs meeting the first criterion are less than 1 km². As such, it is relatively far more likely that any demand for MI WHQA in Zone A will be close to a number of competing MI WHQA providers.

Table 12: Size of Small Areas in km²

Is Meet Criterion 1?	Median Size km ²	Mean Size km ²	Number of SAs
No	0.55	4.78	13,889
Yes	0.07	0.60	4,752

Assessment of Criterion 2a: 75% of the Current Demand must be within 100 metres of two or more ANs

- 4.201 ComReg then inspected each of the 4,752 SAs identified above for the presence of connected premises. In order to be considered for this criterion an SA must contain 4 or more connected premises. This resulted in 465 SAs having more than four connected premises.³⁸⁴
- 4.202 ComReg then applied the criterion of 75% of connected premises being within 100 metres of two or more ANs. This resulted in 394 of these SAs meeting the second criterion and 71 that did not.

³⁸³ However, note the exception of some corridors in the South West and North East where the competing networks are laid along carriageways where it is deemed that break-out from these networks for the provision of terminating MI WQHA services is reasonable.

³⁸⁴ Four premises was chosen as it allows for the 75% criterion to be applied at a reasonable degree of statistical relevance.

Criterion 2b: 75% of Potential Demand must be within 100 metres of two or more alternative networks

- 4.203 Criterion 2a only applies to those 4,287 SAs that prior to considering Criterion 2a above, were identified as failing to have 4 or more connected premises within them.
- 4.204 However, ComReg considered that some analysis of the demand characteristics of such SAs is warranted. To that end, ComReg used the Relevant Premises Organisations subset of the Eircode Organisations as a proxy for potential demand for these SAs.³⁸⁵
- 4.205 However, in this case, ComReg did not apply the critical number of relevant premises as it had for Criterion 2a. Instead, the presence of one relevant premise was considered sufficient to ascertain if the premise met Criterion 2a. This is in contrast to the situation where no relevant premises are present in an SA that meets Criterion 1 as detailed in paragraphs 4.207 to 4.208 below.
- 4.206 Similarly to Criterion 2a, 75% of the relevant premises Organisations needed to be within 100 metres of two or more ANs to fulfil this Criterion. Of the 3,470 SAs that contain a relevant premise Organisation under Criterion 2a, 1,837 of them meet the Criterion of having 75% of the Relevant Premise Organisation within 100 metres of two ANs and 1,633 do not.

SAs containing no relevant premises

- 4.207 There are 817 SAs that contain no relevant premises but meet Criterion 1. In these instances, ComReg has difficulty in ascertaining the demand characteristics within them, and so whether the competitive conditions are similar to those that meet Criterion 2b or don't
- 4.208 Without accurate demand characteristics information, ComReg cannot ascertain if the competitive characteristics are similar to SAs that meet the criteria or those that don't. In such cases we default to the position that they fulfil the criteria.

³⁸⁵ It is important to note that many such organisations have some premises that are not currently connected by MI WHQA but could potentially do so in future – although there is no way of predicting this to any reasonable degree of certainty.

Overall Assessment of the Criteria

- 4.209 Having regard to the analysis above, ComReg has identified that a total of 3,048 SAs meet Criterion 1 and either Criterion 2a or Criterion 2b, see Table 13, below, for a summary.³⁸⁶ ComReg considered that these SAs, relative to other SAs, are likely to have more intensive AN infrastructure that is sufficiently close to relevant premises such that it is suggestive of sufficient homogeneity in the conditions of competition.
- 4.210 ComReg also considers that, given the nature of the assessment, it is suggestive that such conditions of competition are sufficiently homogeneous between them that they can be considered a separate geographic market to those that do not meet the criteria.
- 4.211 These 3,048 SAs represent 16.4% of all SAs.³⁸⁷ These SAs are collectively referred to as 'Zone A'. Those that do not meet the Criteria are considered 'Zone B' SAs.

Table 13: Summary Statistics of Competitive Small Area – Zone A

Description	Total	Share
Small Areas (SAs) in the State.	18,641	100.0%
Criteria 1		
SAs that have 2+ ANs within them.	4,752	25.5%
Criteria 2a (current demand)		
SAs that meet Criteria 1 & with 4+ connected premises	465	2.5%
SAs that meet Criteria 1 & with 4+ connected premises & 75% are within 100M of 2+ ANs.	394	2.1%
Criteria 2b (potential demand)		
SAs that meet Criteria 1 & contain a relevant premise organisation	3,470	18.6%
SAs that meet Criteria 1 & contain a relevant premise organisation & 75% are within 100M of 2+ ANs.	1,837	9.9%
No relevant Premise		
SAs with no relevant premises that meet criteria 1	817	4.4%
Total Competitive SAs		
SAs that meet criteria 1 & 2a or 2b or with no relevant premise.	3,048	16.4%

³⁸⁶ A schematic of this exercise is set out in Figure 11 of the TERA Report.

³⁸⁷ See Section 3.2 of the TERA Report for more details,

Sensitivity of the Criteria Assessment

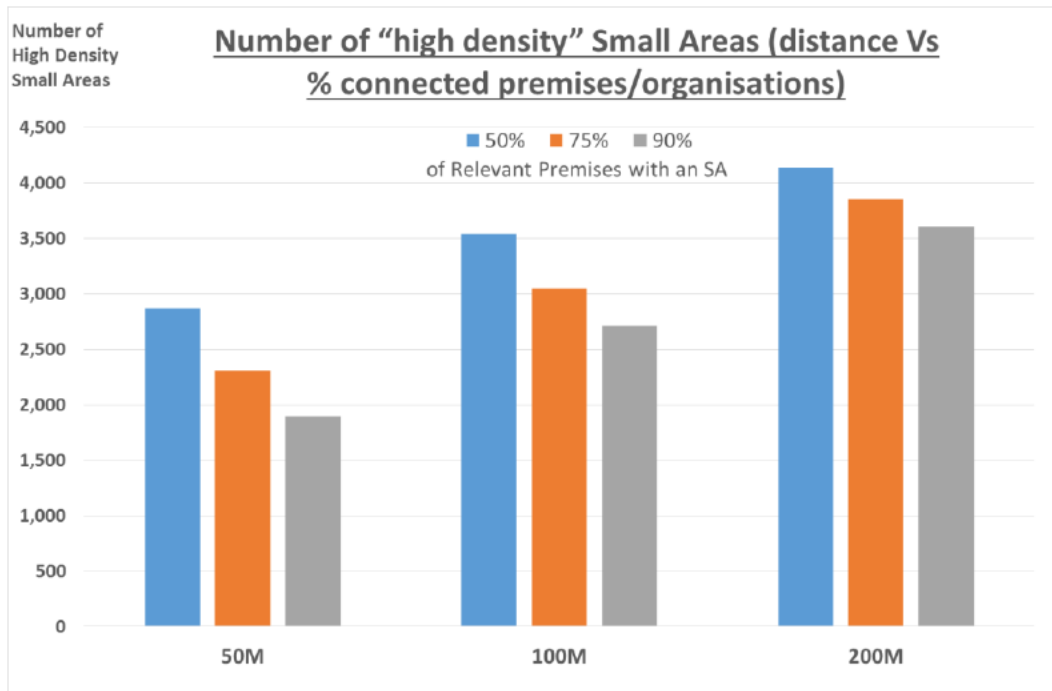
4.212 ComReg undertook a number of steps to test the sensitivity of the above criteria. In particular, ComReg tested the distance criterion of 100 meters by extending it to 200 metres and also shortening it to 50 metres. ComReg then tested these distances with the proportional relevant premises criterion at 50% and 90%. The results of this sensitivity analysis are detailed in both Table 14 and Figure 10, below.

Table 14 Sensitivity of SA Count to Criteria

**% of “high density” small areas
(distance Vs % connected premises/organisations)**

% Relevant Premises	50M	100M	200M
50%	15.41%	18.99%	22.23%
75%	12.37%	16.35%	20.67%
90%	10.16%	14.55%	19.36%

Figure 10: Sensitivity of SA Count to Criteria



4.213 As can be seen in the above table and graph, the number of SAs that have a significant number of relevant premises within particular distances increases as the distance criterion is increased and the percentage of relevant premises decreases. The opposite is the case when the distance criterion is shortened and the percentage of relevant premises is increased.

4.214 However as outlined in paragraph 4.162 above, ComReg is of the preliminary view that 75% and 100 metres are the appropriate criteria.

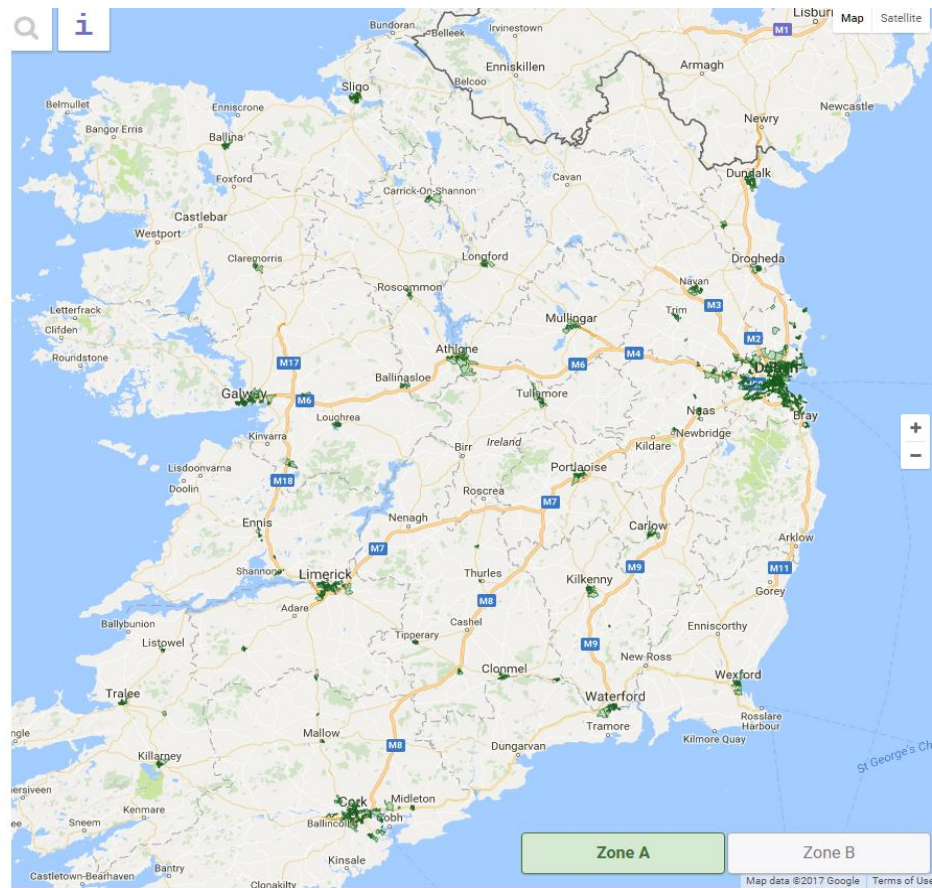
Overall Preliminary Conclusion on Geographic differences in entry conditions and demand characteristics, and variation in the number and size of potential competitors

4.215 Where a SA meets the above criteria, it is suggestive that such SA's – when considered in light of other factors – such as market share distribution - may be part of a separate geographic market to those that do not. In light of this, ComReg has classified the two types of SA as follows:

- (a) Zone A: Areas where there are multiple competing networks capable of readily supplying MI WHQA to the current and potential demand for those services, and
- (b) Zone B: Areas where there are limited or no competing networks capable of readily supplying MI WHQA.

4.216 Figure 11 below shows the distribution of Zone A SA's (in green) after the criteria have been applied in Ireland. As can be seen they are centred around the main urban centres.

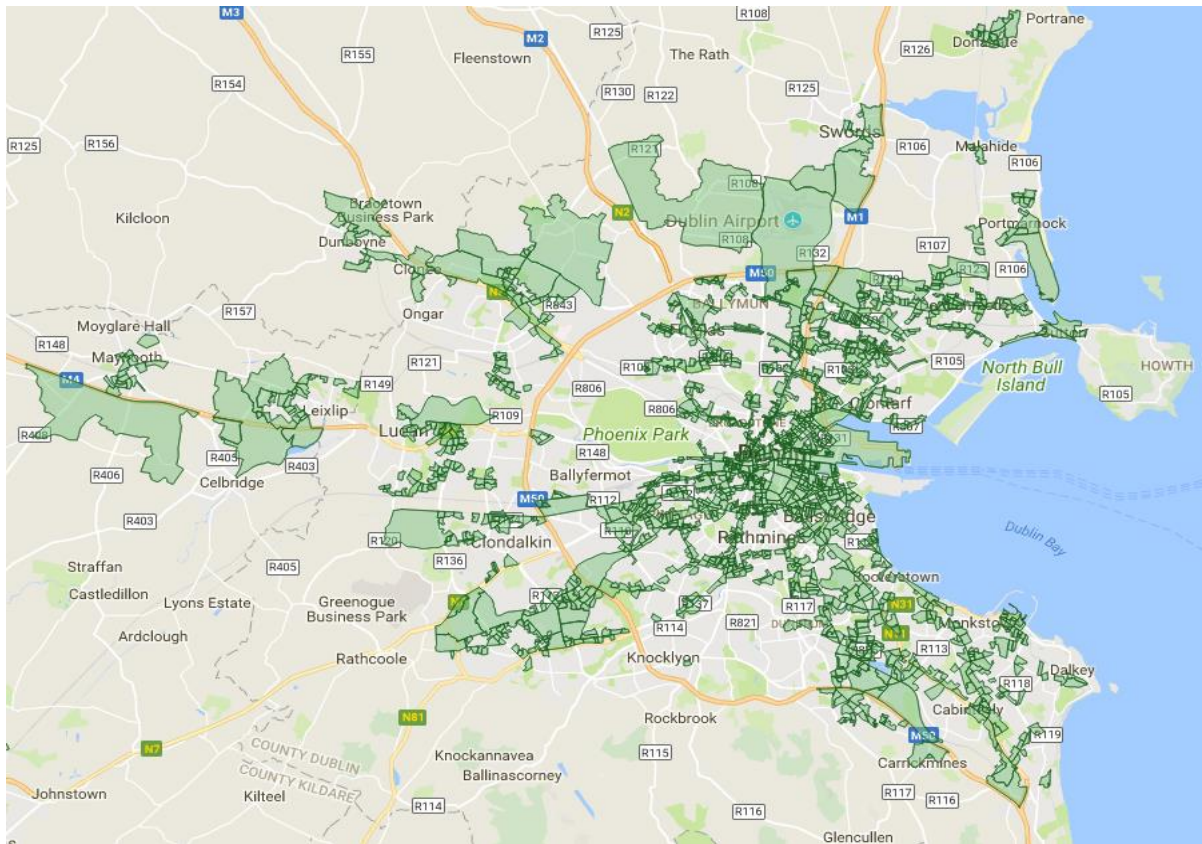
Figure 11: Zone A SA's in Ireland³⁸⁸



4.217 In Figure 12 below, the distribution of Zone A SA's are shown for the Dublin region.

³⁸⁸ Taken from <https://siteviewer.comreg.ie/ComReg1808b>

Figure 12: Zone A SAs in the Dublin Region³⁸⁹



4.218 The full map of Zone A is linked in Appendix 2 and is available at <https://siteviewer.comreg.ie/ComReg1808b>

Distribution of market shares

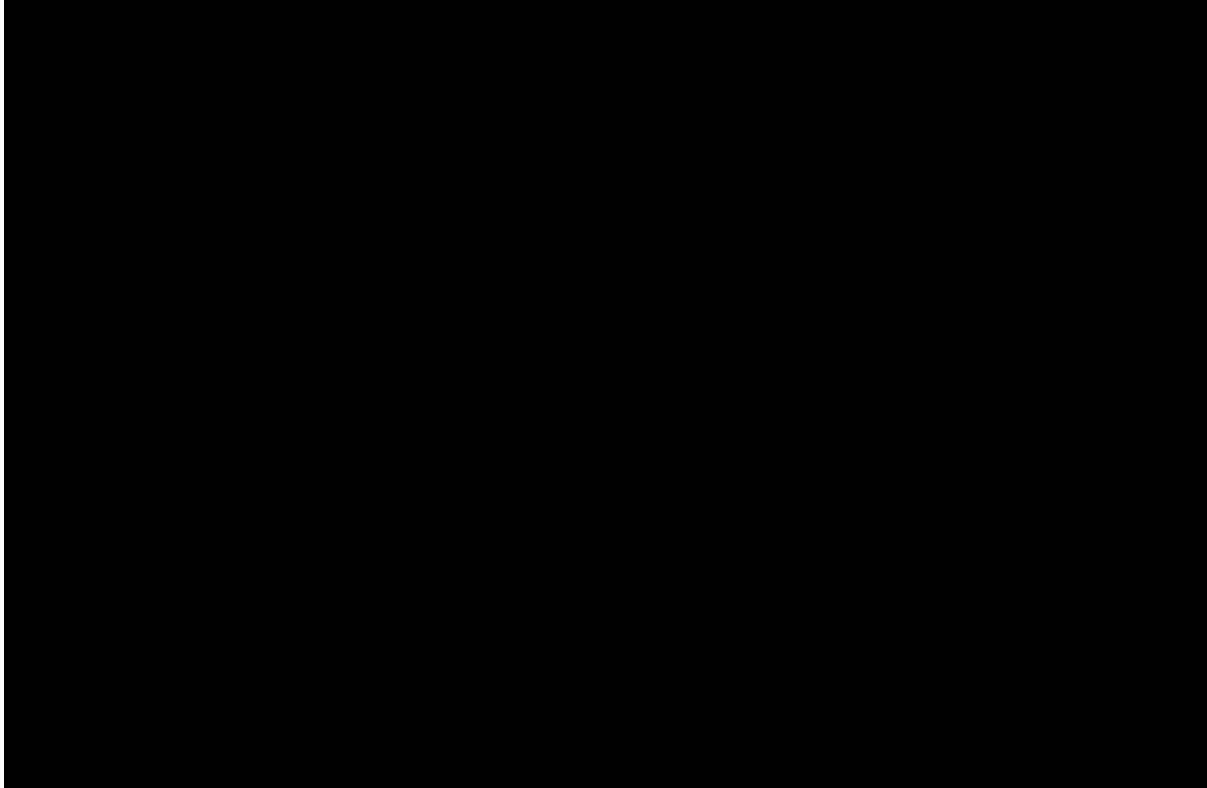
4.219 In this section, ComReg details the market shares of the various SPs in terms of Connected Premises in each of Zones A and B.

4.220 Please note that the Eircom figure includes the Premises Connected by SPs on publicly owned MANs that do not have any or limited backhaul connectivity from ANs. This is because under the MGF approach ComReg considers it unlikely that other SPs could provide MI WHQA to these premises in the absence of regulated MI WHQA for backhaul purposes from Eircom.

³⁸⁹ <https://siteviewer.comreg.ie/ComReg1808b>

4.221 Figure 13 below outlines a geographic distribution of market shares in terms of premises connected by SPs in both Zone A (6,303) and Zone B (3,322) SAs.

Figure 13: MGA Market Shares by Connected Premises [REDACTED]



4.222 Table 15 below gives some more granular detail on the distribution of market shares through separating the various elements that make up Eircom's market share under the MGF approach including, Eircom Retail, Eircom wholesale and the MI WHQA connected premises that are on the State owned MANs that are dependent on Eircom for backhaul.³⁹⁰

³⁹⁰ See Paragraph 4.220 above for details

Table 15: Breakdown of Market Shares by SP and MGF approach [PARTIALLY REDACTED]

Operators	Zone A		Zone B	
	Fixed	Market Share	Fixed	Market Share
Airspeed	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Colt	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Eircom Retail	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Eircom Wholesale	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Enet_UMAN	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Enet_CMAN	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Enet_Other	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
ESBT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
EU	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
GTT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Magnet	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Verizon	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Viatel	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	6,303	100.00%	3,322	100.00%
Total Eircom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

4.223 Overall, the analysis shows that no SP has a market share above 45% in Zone A but that Eircom has a market share in excess of 70% in Zone B. Furthermore, the HHI index for the two zones are 2,290 and 5,116 respectively. This further indicates the differences in market share distribution with Zone B being twice as concentrated as Zone A.³⁹¹

³⁹¹ The Herfindahl Herchsmann Index ('HHI') takes into account the relative size distribution of the firms in a market. It approaches zero when a market is occupied by a large number of firms of relatively equal size and reaches its maximum of 10,000 points when a market is controlled by a single firm. The HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases. Market concentrations based on HHIs are classified as follows: (a) unconcentrated Markets: HHI below 1,500; (b) Moderately Concentrated Markets: HHI between 1,500 and 2,500; and (c) Highly Concentrated Markets: HHI above 2,500

4.224 In ComReg's further preliminary view, these market shares are indicative of significant geographic variations in market shares. Furthermore, ComReg suggest the delineation of stable and consistent separate geographic boundaries within the MI WHQA market based on the competitive conditions between the SAs in Zone A and Zone B.

Evidence of differentiated pricing or marketing strategies

4.225 For the 2016 Consultation ComReg has assessed whether there is evidence of differentiated pricing or marketing that might indicate the presence of different regional or local competitive conditions, and in particular, geographically de-averaged or differentiated pricing.

4.226 In particular ComReg stated the following:

"In relation to pricing behaviour of other SPs, ComReg notes that as part of the geographic market assessment, SPs currently supplying MI WHQA services were asked whether they differentiate their MI WHQA LL product functionality and or pricing/marketing on a geographic basis³⁹². All respondents indicated that they did not differentiate the prices or functionality of their MI WHQA products on a geographic basis where these products are delivered using own network inputs."³⁹³

"In instances where MI WHQA LL products are delivered using other SPs' network inputs, respondents noted that functionality and pricing of such products is more restricted compared to MI WHQA products delivered using own network inputs.

As such, pricing differences appear to be based on availability of on-net infrastructure to deliver the services, rather than a pricing strategy."³⁹⁴

4.227 No Respondent raised any issues in relation to this matter in their Submissions. As such, ComReg is of the further preliminary view that as pricing differences are based on the availability of on-net infrastructure, any differences in the pricing strategies have been captured in the detailed supply and demand characteristics detailed above.

³⁹² ComReg Qualitative Questionnaire; June 2015.

³⁹³ Based on the responses to the ComReg Qualitative Questionnaire.

³⁹⁴ See Paragraphs 5.223-5.235 of the 2016 Consultation.

Overall Further Preliminary Conclusion on the Geographic Scope of the MI WHQA Market

- 4.228 In light of the above, and having the considered the range of factors including differences in entry conditions, the size in undertakings, the differences in demand characteristics and the distribution of market shares, ComReg's further preliminary view is that there are likely to be separate and distinct subnational Geographic markets.
- 4.229 ComReg's analysis of competitive conditions in SAs indicated that the intensity of alternative network investment that can supply MI WHQA services varies depending on area. Furthermore, in SAs where there has been intensive network investment the distribution of market shares among SPs is markedly different.
- 4.230 As such, ComReg has formed the further preliminary view that there are likely to be two separate geographic markets for MI WHQA in the State, namely:
- (a) Zone A: Areas where there are multiple competing networks capable of readily supplying MI WHQA to the current and potential demand for those services, and
 - (b) Zone B: Areas where there are limited or no competing networks capable of readily supplying MI WHQA.
- 4.231 Furthermore, as discussed in greater detail in Section 6 below, the delineation of separate geographic MI WHQA markets has a significant material impact upon ComReg's overall preliminary views on its assessment of competition in the two candidate MI WHQA geographic markets.

4.4.5 Overall Preliminary Conclusions on Definition of the WHQA Markets

- 4.232 ComReg's overall preliminary view is that there are three separate product markets and two separate geographic markets for MI WHQA.
- 4.233 These markets (together referred to as the '**Relevant WHQA Markets**') are summarised below.
- (a) a national **Low Bandwidth TI WHQA Market** consisting of analogue, digital and TDM wholesale LLs with bandwidths $\leq 2\text{Mb/s}$;
 - (b) a national **High Bandwidth TI WHQA Market** consisting of TDM wholesale LLs with bandwidths $> 2\text{Mb/s}$, and

- (c) a **Zone A MI WHQA Market** consisting of all Ethernet, xWDM (and other high bandwidth interfaces) LLs of any bandwidth, with Zone A corresponding to an identified specific set of 3,048 Small Areas ('SA(s)')³⁹⁵ which cover 6,303 wired MI WHQA connected business premises in the State; and
- (d) a **Zone B MI WHQA Market** consisting of all Ethernet, xWDM (and other high bandwidth interfaces) LLs of any bandwidth, with Zone B corresponding to an identified set of 15,593 Small Areas, which cover approximately 3,322 wired MI WHQA connected business premises in the State.

4.5 Trunk-Terminating Boundaries of the WHQA product markets

4.5.1 Overview

- 4.234 The trunk-terminating boundary between networks delineates parts of a network that may face different competitive conditions of supply. In trunk networks, SPs may be able to aggregate traffic at relevant network points and so can exploit greater economies of scale, scope and density to overcome barriers to entry.³⁹⁶
- 4.235 In relation to WHQA, these trunk markets are effectively adjacent to terminating WHQA segments as SPs require both terminating and trunk segments to complete end-to-end connectivity.
- 4.236 Under the 2008 Decision, the trunk-terminating boundary of the then defined wholesale LL market is delineated by a bandwidth of greater than or equal to 155 Mb/s between certain 20 urban centres, irrespective of the network topology and type. In this respect, the 2008 Decision noted that:

“Circuits which are provided using established infrastructure, between certain urban centres ... and which are of a capacity equal to or greater than STM-1 (155Mb/s) fall into the market for trunk segments of wholesale leased lines. OAO investment on these routes reflects the difference in the underlying economic conditions of supply and demand.”³⁹⁷

³⁹⁵ As noted in paragraph 4.132 Small Areas have been developed by Ordnance Survey Ireland ('OSI') for the Central Statistics Office ('CSO'). See <http://www.cso.ie/en/census/census2016reports/census2016smallareapopulationstatistics/> for more details.

³⁹⁶ For example, SPs can use the trunk network to aggregate traffic for other services including (but not limited to) broadband and telephony.

³⁹⁷ Paragraph 5.7, 2008 Decision.

4.237 Under the 2008 Decision, all such circuits are currently considered to be competitive due to the presence of 3 or more SPs providing connectivity between these urban centres and consequently and no SP is subject to ex ante SMP regulation.

4.238 In its 2014 Recommendation, the European Commission states, in relation to trunk LL markets, that:

“...the presumption that trunk segments are replicable on a national scale remains valid. NRA’s should not revisit their analysis of trunk segments of leased lines where these have been previously found to be competitive.” ³⁹⁸

4.239 However, ComReg considers that the increase in competing trunk infrastructure by SPs since the 2008 Decision, means that the Trunk market is likely to have expanded since then.

4.240 To that end, ComReg sets out below its analysis of the MI WHQA trunk market. Having regard to the below analysis, ComReg’s preliminary view is that the MI WHQA trunk market should be extended to the 107 Eircom Aggregation Nodes³⁹⁹ where there are three or more competing MI WHQA SPs present.⁴⁰⁰

4.5.2 Assessment of Trunk Market

4.241 In Section 4 of the Oxera Report that accompanied the 2016 Consultation⁴⁰¹ Oxera set out in detail the issues to consider when delineating the trunk-terminating boundary. However, as ComReg considered in the 2016 Consultation that no SP was likely to have SMP regardless of the delineation of any Trunk/Terminating boundary, this issue was not examined in depth in that particular Consultation.

³⁹⁸ Section 4.2.2.3, 2014 Recommendation.

³⁹⁹ As of 21 February 2018.

⁴⁰⁰ This includes Eircom.

⁴⁰¹ Chapter 4, Oxera Report set out in Appendix 2 of the 2016 Consultation (‘Oxera Report’).

MI WHQA Market Trunk-Terminating Boundary Assessment

4.242 In relation to the MI WHQA market, Oxera considered that SPs are likely to be able to aggregate traffic between Eircom Aggregation Areas and as such, the MI trunk-terminating boundary should be delineated as traffic between Aggregation Areas. Consequently, intra-regional traffic within an aggregation area was considered to be part of the terminating market.⁴⁰²

4.243 In arriving at the above, Oxera set out a number of options for delineating the trunk-terminating boundary for the MI WHQA Market.

4.244 Oxera stated that:

“OAOs have extensive fibre routes at the regional level. This facilitates alternative interconnections between regions...Together, these points suggest that to the extent that OAOs are reliant on eircom, this is to supply terminating segment for Ethernet services in some instances.”⁴⁰³

4.245 Moreover, Oxera concluded that:

“The available evidence suggests that OAOs are able to aggregate Ethernet traffic between regions in Ireland...The NGN area approach also allows for flexibility with regard to the location of OAO infrastructure, and hence captures not only eircom but also OAO aggregation opportunities. Therefore, Oxera recommends the aggregation area approach to define the Ethernet trunk-terminating boundary.

This means that all MI circuit segments between different NGN aggregation areas are defined as trunk circuits. Circuit segments entirely within an aggregation area are defined as terminating segments.”⁴⁰⁴

4.246 However, Oxera also considered a more granular approach whereby aggregation opportunities for SPs could be assessed at an Aggregation Node level. However, due to the then unavailability of reliable granular data at the Aggregation Node level, it was not considered appropriate to define the Trunk/Terminating boundary with reference to these.

⁴⁰² Section 4.4, Oxera Report.

⁴⁰³ Section 4.4, Oxera Report.

⁴⁰⁴ This would include segments served by APT Reach nodes or any other Ethernet extension product, where these devices would be associated with the nearest (logical) NGN aggregation node. Note that the Oxera terminology in the quotation above that refers to “areas” corresponds to Eircom Aggregation NGN regions.

⁴⁰⁵ Chapter 4 of the Oxera Report.

4.247 In particular, Oxera stated that:

“.....there is a lack of evidence to support a...trunk boundary at the aggregation node level. This definition is based on assessing OAO locations in proximity to eircom’s NGN nodes. There are significant practical issues in Undertaking this analysis, given the lack of an objective distance measure to determine the constraint imposed by OAO locations near to (but not co-located with) eircom NGN nodes.”⁴⁰⁵

4.248 However, since the 2016 Consultation, ComReg has been in a position, having regard to the better availability and quality of data from SPs, to carry out a more detailed assessment of the geographic conditions of competition for MI WHQA throughout the State. As detailed in Section 9 below, ComReg has ascertained the reach of the networks of SPs providing MI WHQA to within circa 100 metres of every non-residential building in the state, including the proximity of such networks to Eircom Aggregation Nodes. This allows ComReg to undertake a much more granular assessment of the locations of SPs for the purposes of trunk connectivity.

4.249 In Undertaking this assessment, ComReg took into account SPs who are active in providing MI WHQA to other SPs for the purposes of network backhaul or other core connectivity services.⁴⁰⁶ i.e., SPs operating in the merchant market. Furthermore, ComReg notes that some SPs connectivity is regional while others have a wider, more national footprint. However, in all the identified Aggregation Nodes location, competitive trunk services are be available to MI WHQA purchasers.

4.250 In doing so, ComReg has ascertained those Eircom Aggregation Node locations where three or more providers of on-net MI WHQA are either already interconnected or are within circa 100 metres of a particular Aggregation Node. This results in the identification of 107 Aggregation Node locations (**‘Trunk Nodes’**) being identified, with these being set out in Appendix: 8.

4.251 This means that 3 SPs can offer backhaul services from each of these Trunk Nodes and at least 2 alternate SPs can reasonably be capable of establishing interconnection with Eircom at these Trunk Node locations. It is ComReg’s preliminary view therefore that MI WHQA connectivity between these 107 Trunk Node locations is therefore, considered part of the MI WHQA Trunk Market.

⁴⁰⁵ Chapter 4 of the Oxera Report.

⁴⁰⁶ These SPs are [§< [REDACTED]].

Should the Trunk market be delineated by bandwidth?

4.252 Furthermore, as noted in paragraph 4.236, the current Trunk market is defined under the 2008 Decision by reference to STM-1 (155Mb/s) i.e. WHQA LLs at or above 155Mb/s are considered trunk segments and services below this bandwidth are considered part of the terminating market.

4.253 However, ComReg does not consider that a bandwidth break for the provision of MI WHQA is appropriate as a chain of substitution exists between MI WHQA services at all bandwidths.⁴⁰⁷ This observation applies equally to all MI WHQA markets, including those between the identified Trunk Nodes in the MI WHQA Trunk Market.

Aggregation Regions and the Terminating Market

4.254 It should also be noted that although ComReg considers that traffic between the identified Trunk Nodes is trunk and therefore competitive, it does not necessarily mean that all other traffic is competitive. Although other traffic outside of the Trunk Market is considered terminating, the MI WHQA market is further delineated by its geographic scope and only MI WHQA terminating in Zone B - where ComReg is of the further preliminary view that Eircom is likely to have SMP - will be subject to regulated access.⁴⁰⁸

4.255 However, it should be noted the delivery of the regulated MI WHQA from locations in Zone B⁴⁰⁹ must always be to an appropriate⁴¹⁰ Aggregation Node or equivalent for handover so that the Access Seeker has the opportunity to avail of competitive network for the purposes of carrying the traffic to another location.⁴¹¹

4.256 Although the specificities of the proposed access and ancillary services that Eircom should provide is set out in Section 9, please note the following from the outset.

4.257 ComReg has proposed that an appropriate node for handover/interconnection will be at the following three points on Eircom's network:

⁴⁰⁷ See paragraph 4.68 above.

⁴⁰⁸ See Section 5.6.3 for details.

⁴⁰⁹ See Section 9 for details

⁴¹⁰ See Appendix: 8 and Appendix: 9 paragraph for details .

⁴¹¹ In this context, the Trunk Nodes serve as a bridgehead between not only the trunk and terminating markets but also Zone A and Zone B.

- (a) The connected premises parent Trunk Node⁴¹²; or
- (b) At the connected premises parent Non-Trunk node (where the AS can achieve interconnection at this point) or
- (c) Where the connected premises is connected to a Non-Trunk Node as in (b) above, Eircom should handover the service at an Aggregation Node located at either of the corresponding Edge Node exchanges within the Aggregation Region (all Edge Node exchanges are included in the proposed list of Trunk-Node).

4.258 The following restrictions would also apply:

- (a) Eircom will not be obliged to convey traffic higher into its network than to a competitive Trunk-Node (where this is the parent node of the connected premises), or if the parent trunk node is not competitive, then the obligation extends to conveying the traffic to the trunk node co-located with the parent edge node of the demanding traffic; and
- (b) Eircom will not be obliged to convey any traffic between Aggregation Regions.

4.259 Moreover, it should also be noted from the outset that Eircom is obliged to provide interconnection services at the Trunk Node locations, even though they are - by definition - part of the competitive geographic market – Zone A. This is because if Access Seekers cannot interconnect at the Trunk Node, it is not possible for them to effectively compete in Zone B or in the related retail Leased Lines markets.

Preliminary Conclusion on the MI WHQA Trunk Terminating Boundary

4.260 ComReg is of the preliminary view that the trunk market for MI WHQA should be reapportioned to include all MI WHQA irrespective of bandwidth between each of the Trunk Nodes set out in Appendix: 8.

4.5.3 Terminating-Trunk Boundaries of the TI WHQA product markets

4.261 In the 2016 Consultation ComReg stated the following;

⁴¹² This is where there are 2 alternative SPs in close proximity and can therefore easily achieve interconnection –see Section 9 and Appendices 8 and 9

“the conditions of competition in all segments of TI WHQA LLs - including core conveyance – appear to be sufficiently homogenous such that ComReg is of the preliminary view that all TI WHQA LLs within each of the relevant TI WHQA Product Markets) can be considered to be terminating segments. As such, ComReg is of the preliminary view that all segments within each of the LB TI WHQA Product Market and HB TI WHQA product market are considered to be terminating segments.” ⁴¹³

4.262 No responses to the 2016 Consultation were received in relation to this consideration. Therefore, ComReg’s view remains the same as that set out above in the 2016 Consultation in relation to the LB TI WHQA trunk-terminating boundary.⁴¹⁴

4.6 Overall Preliminary Position

4.263 In the 2016 Consultation⁴¹⁵ ComReg analysed the WHQA Market from a product perspective and set out its preliminary view that there were three separate WHQA Markets⁴¹⁶. In paragraphs 4.24 to 4.39 of this Further Consultation ComReg set out Respondents’ views before subsequently considering these in paragraphs 4.65 to 4.124 above.

4.264 In paragraphs 5.189 to 5.237 of the 2016 Consultation ComReg analysed the WHQA Markets from a geographic perspective and set out its preliminary view that each of the separate WHQA Markets are national in scope. In paragraphs 4.40 to 4.63 of this Further Consultation ComReg set out Respondents’ views before subsequently considering these in paragraphs 4.125 to 4.224 above.

4.265 In summary, ComReg has decided to maintain its preliminary views on the definition of the TI WHQA Markets, save for the exclusion of WHQA Wireless LLs (which are minimal in number). However, ComReg has decided to amend its preliminary views with respect to the definition of the MI WHQA Markets, from both a product and geographic perspective, as more particularly described below.

4.6.1 Definition of the WHQA Markets

4.266 ComReg’s preliminary position is that there are four separate product markets:

⁴¹³ See Paragraphs 5.179 and 5.180 of the 2016 Consultation.

⁴¹⁴ See Paragraphs 5.135 and 5.144 of the 2016 Consultation.

⁴¹⁵ See paragraphs 5.15 to 5.188 of the 2016 Consultation.

⁴¹⁶ See paragraph 4.15 above.

- (a) a national **Low Bandwidth TI WHQA Market** consisting of analogue, digital and TDM wholesale LLs with bandwidths $\leq 2\text{Mb/s}$;
 - (b) a national **High Bandwidth TI WHQA Market** consisting of TDM wholesale LLs with bandwidths $> 2\text{Mb/s}$, and
 - (c) two separate geographically differentiated '**MI WHQA Markets**' consisting of all Ethernet, xWDM (and other high bandwidth interfaces) LLs of any bandwidth, in particular:
 - (d) a **Zone A MI WHQA Market** consisting of all Ethernet, xWDM (and other high bandwidth interfaces) LLs of any bandwidth, with Zone A corresponding to an identified specific set of 3,048 Small Areas ('SA(s)')⁴¹⁷ which cover 6,303 wired MI WHQA connected business premises in the State; and
 - (e) a **Zone B MI WHQA Market** consisting of all Ethernet, xWDM (and other high bandwidth interfaces) LLs of any bandwidth, with Zone B corresponding to an identified set of 15,593 Small Areas, which cover 3,322 wired MI WHQA connected business premises in the State.
- 4.267 The above product markets (together referred to as the '**Relevant WHQA Markets**') do not include wholesale wireless LLs due to the lack of effective demand supply and demand side substitutability between wired and wireless wholesale LLs. Nevertheless, ComReg considers any competitive constraint posed by suppliers of wireless LLs when carrying out competition analysis and assessment of SMP in Section 5.2.3 of this Further Consultation.
- 4.268 Asymmetric wholesale business broadband services are not considered a substitute for a WHQA LLs due to the lack of effective supply and demand side substitutability between the products.
- 4.269 Passive infrastructure, such as Dark Fibre, is considered as an upstream input that can be used to supply retail and/or wholesale LLs, but not as an effective direct substitute for a wholesale LL.
- 4.270 Eircom's and alternative network owners' self-supply is included in the Relevant WHQA Markets if these owners are supplying WHQA products to Access Seekers.

⁴¹⁷ As noted in paragraph 4.132, Small Areas have been developed by Ordinance Survey Ireland ('OSI') for the Central Statistics Office ('CSO'). See <http://www.cso.ie/en/census/census2016reports/census2016smallareapopulationstatistics/> for more details.

- 4.271 As noted above, ComReg's preliminary position is that the TI WHQA Markets are national in scope given that the conditions of competition appear to be sufficiently homogenous.
- 4.272 In relation to MI WHQA Market, ComReg's preliminary position is that there are two distinct geographic MI WHQA Markets, namely Zone A and Zone B.
- 4.273 ComReg notes that conditions of competition for MI WHQA appear to be sufficiently heterogeneous within each respective individual Zone A and Zone B as to be distinct markets. At the same time, the conditions of competition within each individual SA within Zone A on the one hand and within each individual SA within Zone B, on the other, appear to be sufficiently similar such that aggregation of SAs into these two distinct geographic Zone A and Zone B markets is appropriate.

4.6.2 Trunk/Terminating Boundary for WHQA markets

- 4.274 ComReg is of the further preliminary view that the trunk/terminating boundary for MI WHQA should be revised from the current 20 urban centres to the 107 Trunk Nodes listed in Appendix: 8 where alternative providers of MI WHQA are available to provide trunk conveyance.
- 4.275 In relation to the LB TI WHQA, ComReg is of the further preliminary view that all such circuits are considered terminating segments.

Question 2:	Do you agree with ComReg's further preliminary conclusions on the definition of the Relevant WHQA Markets? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.
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5 Competition Analysis and Assessment of SMP in the WHQA Markets

5.1 Introduction

- 5.1 In this Section, ComReg sets out its further preliminary views in relation to the Competition Assessment of the Relevant WHQA markets.
- 5.2 In summary, ComReg has decided to maintain its preliminary view that there are two TI markets: an LB TI WHQA market and a HB TI WHQA market. Furthermore, ComReg is maintaining its preliminary view that Eircom is likely to have SMP in the LB TI WHQA market and that no SP is likely to have SMP in the HB TI WHQA market.
- 5.3 However, ComReg is of the further preliminary view that there are two distinct MI WHQA markets delineated by their geographic scope: a Zone A MI WHQA Market and a Zone B MI WHQA market. Furthermore, ComReg is of the further preliminary view that no SP is likely to have SMP in the Zone A MI WHQA market and that Eircom is likely to have SMP in the Zone B MI WHQA market.
- 5.4 This Section is set out as follows;
- (a) First, Section 5.2 sets out the preliminary views of the 2016 Consultation;
 - (b) Then, in Section 5.3, ComReg details Respondents views of the position set out in the 2016 Consultation;
 - (c) Next, in Section 5.4 and 5.5, ComReg responds to the Respondents views in relation to the competition assessment in the 2016 Consultation;
 - (d) Then, in Section 5.6, ComReg details its further competition assessment of the relevant MI WHQA markets – namely, the Zone A MI WHQA market and the Zone B MI WHQA; and
 - (e) Finally, Section 5.7 sets out ComReg’s overall preliminary conclusions.

5.2 Preliminary views set out in the 2016 Consultation

- 5.5 In the 2016 Consultation ComReg first set out its approach to assessing competition in each of the Relevant WHQA Markets and, in doing so, set out the relevant criteria according to which it would consider whether any SP had significant market power (SMP) in these markets⁴¹⁸.
- 5.6 ComReg noted that in markets subject to ex ante SMP regulation, an SMP SP's behaviour may also be restricted by way of existing SMP regulatory controls. It was identified that it is necessary, however, to consider the potential ability and incentive of the undertaking to exert market power in the absence of ex ante SMP regulation in the markets concerned. To do otherwise could lead to a circular finding of non-dominance on the basis of SMP regulatory remedies that would cease to exist following the completion of a market analysis and, in the absence of which, the authorised undertaking may be able to exert market power.
- 5.7 In the 2016 Consultation⁴¹⁹, ComReg then assessed competition in each of the Relevant WHQA Markets having regard to the effectiveness of: ⁴²⁰
- (a) **existing competition in the Relevant WHQA Markets:** an assessment of factors such as vertical integration, market shares, relative strength of existing competitors, barriers to expansion, indirect constraints and pricing behaviour⁴²¹;
 - (b) **potential competition in the Relevant WHQA Markets:** an assessment of factors such as control of infrastructure not easily duplicated, technological advantages or superiority, barriers to entry in the Relevant WHQA Markets as well as considering the overall strength of potential competitors⁴²²; and

⁴¹⁸ See paragraphs 6.13 to 6.21 of the 2016 Consultation.

⁴¹⁹ See Section 6 of the 2016 Consultation.

⁴²⁰ The framework and approach used by ComReg to assess SMP was set out in paragraphs 6.4 to 6.22 of the Consultation, including the factors which ComReg considered to be most relevant to the assessment of SMP.

⁴²¹ See paragraphs 6.26 to 6.45, 6.100 to 6.103 and 6.110 to 6.130 of the 2016 Consultation.

⁴²² See paragraphs 6.46 to 6.68, 6.104 and 6.131 to 6.134 of the 2016 Consultation.

- (c) **strength of any countervailing buyer power ('CBP')**: an assessment of the impact posed by any strong buyers of WHQA products on the competitive behaviour of WHQA SPs⁴²³.

5.2.1 SMP Assessment in the LB TI WHQA Market

5.8 ComReg assessed competition within the LB TI WHQA Market having regard to existing competition, potential competition and any CBP. In relation to existing competition, ComReg noted that⁴²⁴:

- (a) Eircom had a high and persistent hypothetical⁴²⁵ market share⁴²⁶ in a slowly declining market over the period 2013 to 2015 with its share having increased from [3< [REDACTED]] in 2013 to [3< [REDACTED]]⁴²⁷ in 2015. It was also noted that Eircom's existing competitors in the retail LB TI Market continue to be heavily dependent on Eircom's wholesale inputs when providing associated retail services. In this regard, at the end of 2015 [3< [REDACTED]]⁴²⁸ of retail LB TI LLs provided by Eircom competitors depended on the use of wholesale inputs supplied by Eircom.
- (b) Eircom's hypothetical market share is unlikely to fall close to or below 50% within the lifetime of this market review due to the lack of competitors⁴²⁹ that would be capable of exercising a sufficiently effective competitive constraint and there being no notable evidence of existing competition materially impacting Eircom's pricing behaviour.

⁴²³ See paragraphs 6.69 to 6.94, 6.105 and 6.135 to 6.141 of the 2016 Consultation.

⁴²⁴ See paragraphs 6.25 to 6.45 of the 2016 Consultation.

⁴²⁵ In this context 'hypothetical' refers to the market share absent regulation under the MGA.

⁴²⁶ In paragraphs 5.20 to 5.24 of the 2016 Consultation and paragraph 4.13 above, ComReg noted that self-supply of SPs' wholesale LLs to its retail businesses is considered to be a part of the Relevant WHQA Markets due to the fact that such supply is typically readily divertible to the wholesale merchant market. However, Eircom's supply of WHQA products to its mobile arm Eircom Group Mobile and its joint subsidiary Tetra as well as MNOs' internal supply of LL connectivity to their own downstream mobile operations were considered to be outside of scope of the Relevant WHQA Markets given such supply was captive. Therefore, market shares presented in Section 6 of the 2016 Consultation include SPs' self-supplied retail LLs with the exception of the MI WHQA used by the aforementioned subsidiaries.

⁴²⁷ Greater than 75%.

⁴²⁸ Greater than 60%.

⁴²⁹ In this regard, ComReg noted that Eircom's market share is more than six times larger than market share of its nearest competitor.

- (c) Other factors such as vertical integration, relative strength of existing competitors, barriers to expansion and indirect constraints also indicate that Eircom is unlikely to be sufficiently constrained by existing competition such that it would prevent Eircom from behaving, to an appreciable extent, independently of competitors, customers and consumers.
- 5.9 ComReg then assessed the potential competition within the LB TI WHQA Market and in this regard noted that⁴³⁰:
- (a) LB TI WHQA Market is in slow decline which, in ComReg's preliminary view, implied that there is likely to be insufficient potential new demand to incentivise an SP to invest in infrastructure to provide LB TI WHQA services in the future;
 - (b) Entry into LB TI WHQA Market by an existing MI WHQA SP through adapting its existing network is unlikely having regard to the slow decline in this market and the uncertainty this creates about the ability for an SP to recover any investment associated with such adaption (which would be largely sunk and stranded); and
 - (c) Entry into LB TI WHQA Market by using LLU inputs is unlikely as entrants would be unlikely to benefit from the same economies of scale to those enjoyed by the incumbent WHQA supplier and it would be likely to face sunk costs in attempting to replicate (even to a lesser scale) the WHQA service using LLU inputs.
- 5.10 In assessing CBP⁴³¹, ComReg set out the framework for CBP assessment and, having regard to this framework, noted that:
- (a) Eircom's retail arm, with a [\geq [REDACTED]]⁴³² market share of all LB TI LL purchases is, by a significant margin, the largest purchaser in the LB TI WHQA Market. BT has a [\geq [REDACTED]]⁴³³ market share of overall Low Bandwidth TI WHQA sales and is the largest third-party purchaser of LB TI WHQA products from Eircom;
 - (b) Any dependency by Eircom on wholesale revenues earned from Access Seekers could be largely converted to retail revenues through foreclosing access to the LB TI WHQA products and appropriating the retail demand currently being met by Access Seekers;

⁴³⁰ See paragraphs 6.46 to 6.68 of the 2016 Consultation.

⁴³¹ See paragraphs 6.69 to 6.94 of the 2016 Consultation.

⁴³² Greater than 65%. This only includes Eircom's retail self-supply.

⁴³³ Less than 20%.

- (c) The existence of credible alternative sources of LB TI WHQA supply is unlikely due to an absence of effective potential competition emerging in the LB TI WHQA Market; and
 - (d) There is no firm behavioural evidence to suggest that Eircom is facing effective pricing constraints due to Access Seekers' bargaining power during negotiations.
- 5.11 Taking into account the assessment of existing competition, potential competition and any CBP, ComReg was of the preliminary view that Eircom should be designated as having SMP in the LB TI WHQA Market.

5.2.2 SMP Assessment in the HB TI WHQA Market

- 5.12 ComReg started its SMP assessment in the HB TI WHQA Market by examining the strength of existing competition⁴³⁴. In this regard, ComReg noted that:
- (a) the HB TI WHQA Market is in terminal decline with only [\leq ■■■] active circuits in existence at the end of 2015 (having fallen from [\leq ■■■] in 2013). It was therefore questionable whether this market is likely to be worthy of monopolisation given its scale.
 - (b) BT is the largest provider of services in this market with a hypothetical market share of [\leq ■■■]⁴³⁵. Eircom's hypothetical market share at the end of 2015 was [\leq ■■■]⁴³⁶ having declined by [\leq ■■■] since 2013.
- 5.13 Given the decline of the HB TI WHQA Market, ComReg considered that it is unlikely that there will be any potential competition in the HB TI WHQA Market⁴³⁷.
- 5.14 In relation to the CBP assessment, ComReg considered that such assessment could not be meaningfully employed in ComReg's analysis of the HB TI WHQA Market given the state of decline of this market⁴³⁸.

⁴³⁴ See paragraphs 6.110 to 6.130 of the 2016 Consultation.

⁴³⁵ Less than 50%.

⁴³⁶ Less than 30%.

⁴³⁷ See paragraph 6.104 of the 2016 Consultation.

⁴³⁸ See paragraph 6.105 of the 2016 Consultation.

5.15 Having regard to the assessment of existing competition, potential competition and any CBP, ComReg was of the preliminary view that no SP is likely to have SMP in the HB TI WHQA Market.

5.2.3 SMP Assessment in the MI WHQA Market

5.16 ComReg started its SMP assessment in the MI WHQA Market by examining the strength of existing competition⁴³⁹, noting the following:

- (a) Eircom is the largest provider of MI WHQA products with a hypothetical national market share of [§<■■■■] ⁴⁴⁰ at the end of 2015. A number of SPs held hypothetical market shares above 10% including BT [§<■■■■], Enet [§<■■■■] and Airspeed [§<■■■■]. ⁴⁴¹
- (b) Eircom's main competitors in the MI WHQA market have their own wired or wireless network infrastructure with a wide geographic coverage⁴⁴² as they have established Points of Presence ('POPs') in all provinces and many of the regional centres⁴⁴³.
- (c) The dependency on Eircom's MI WHQA LL inputs for the provision of retail and/or wholesale MI LL services is relatively low with only [§<■■■■] ⁴⁴⁴ of retail MI LL services provided by Eircom's competitors depending on wholesale inputs from Eircom at the end of 2015. In the wholesale market, the corresponding figure was [§<■■■■] ⁴⁴⁵.

⁴³⁹ See paragraphs 6.100 to 6.103 of the 2016 Consultation.

⁴⁴⁰ Less than 40%.

⁴⁴¹ Hypothetical in this context refers to the market share that would pertain in the absence of regulation on Eircom

⁴⁴² ComReg noted, however, that the ubiquity of Eircom's network has not been replicated by any competitor.

⁴⁴³ Appendix: 11 of the 2016 Consultation illustrated the geographical reach of Eircom's competitors' networks.

⁴⁴⁴ Less than 15%.

⁴⁴⁵ Less than 15%.

- (d) The geographic analysis of market shares indicated that differences in market shares and the strength/presence of SPs inside and outside Business Parks is not sufficient to warrant the delineation of separate geographic MI WHQA Markets⁴⁴⁶.
 - (e) Other factors relevant to existing competition in the MI WHQA Market such as vertical integration, strength of existing competitors, barriers to expansion and pricing behaviour indicated that there is no SP with SMP in the MI WHQA Market.
- 5.17 ComReg then assessed potential competition within the MI WHQA Market and in this regard noted that barriers to entry appeared to have been largely been overcome, particularly in areas of high demand for LLs as was evident from infrastructure based competition and the strength of existing competitors⁴⁴⁷. ComReg also noted that the prospects for competition in the MI WHQA Market, based on trends to date, appear to be favourable as the roll-out of the SIRO network and the NBP should over time further strengthen the presence of independent infrastructure based competition, to the extent that they can be utilised to provide MI WHQA LLs. To the extent that successful bids involve the rollout of new infrastructure.
- 5.18 In relation to the CBP assessment, ComReg considered that⁴⁴⁸:
- (a) There is a low reliance by retail customers on any particular SP for the supply of MI WHQA products, with the majority of retail MI LLs being supplied either on-net or purchased from a number of MI WHQA SPs.
 - (b) The threat of switching supply is credible as there are a number of possible alternative suppliers of MI WHQA products.
- 5.19 Having regard to the assessment of existing competition, potential competition and any CBP, ComReg was of the preliminary view that no SP is likely to have SMP in the MI WHQA Market.

⁴⁴⁶It was also noted that such delineation would not result in any SP having a market share suggestive of SMP in any of the subnational MI WHQA markets.

⁴⁴⁷ See paragraphs 6.131 to 6.134 of the 2016 Consultation.

⁴⁴⁸ See paragraphs 6.135 to 6.141 of the 2016 Consultation.

5.3 Respondents' Views

- 5.20 All 12 Respondents expressed views on ComReg's competition analysis and assessment of SMP in the Relevant WHQA Markets.
- 5.21 Eircom generally agreed with ComReg's SMP assessment, but provided comments on the proposed pricing obligations in the LB TI WHQA Market and the proposed sunset period for the withdrawal of existing remedies in the HB TI WHQA and MI WHQA Markets (which are summarised in Section 7⁴⁴⁹ and Section 10⁴⁵⁰ respectively).
- 5.22 Airspeed, ALTO, BT, Cogent, Enet, GTT, HEAnet, Three⁴⁵¹, Verizon, Virgin Media⁴⁵² and Vodafone disagreed with ComReg's competition assessment and also made comments⁴⁵³ in relation to the proposed sunset period for the withdrawal of existing remedies in the HB TI WHQA and MI WHQA Markets.
- 5.23 ComReg has summarised the Respondents' views on the competition analysis and assessment of SMP in the Relevant TI WHQA Markets and the MI WHQA Market below, in particular:
- (a) Respondents views on the SMP assessment in the TI WHQA Markets are discussed in paragraphs 5.25 to 5.28 below; and
 - (b) Respondents views on the SMP assessment in the MI WHQA Market are discussed in paragraphs 5.29 to 5.41 below.

5.3.1 Respondents' views on the SMP assessment in the TI WHQA Markets

- 5.24 ComReg has summarised the Respondents' main views on the assessment of competition in the Relevant TI WHQA Markets, grouping the key issues raised into the identified themes below, namely:

⁴⁴⁹ See paragraphs 7.97 to 7.106 below.

⁴⁵⁰ See paragraph 10.10 below.

⁴⁵¹ Three did not express any explicit view on ComReg's SMP assessment, but supported ALTO's Submission in this respect.

⁴⁵² Virgin Media did not express any explicit view on ComReg's SMP assessment, but it can be presumed that Virgin Media disagreed with ComReg's preliminary views given its comments in relation to the assessment of the WHQA Market t.

⁴⁵³ These comments are summarised in paragraphs 10.7 to 10.9 below.

- (a) Issues surrounding the deregulation of the HB TI WHQA Market (discussed in paragraphs 5.25 to 5.28 below); and
- (b) The declining demand for the LB TI WHQA products was not properly considered (discussed in paragraphs 5.29 to 5.41 below).

Issues surrounding the deregulation of the HB TI WHQA Market

- 5.25 5 Respondents expressed views in relation to the competition assessment in the HB TI WHQA Market. ALTO, BT, HEAnet and Eircom agreed that no SP has SMP in the HB TI WHQA Market.
- 5.26 Further, Eircom considered that the proposed sunset period for removal of existing obligations in the HB TI WHQA Market is neither proportionate nor appropriate.
- 5.27 Verizon was of the view that Eircom should be designated with SMP in the HB TI WHQA Market. Verizon noted that size and nature of this market in itself does not merit de-regulation and it considered that, in the absence of regulation, end-users purchasing these services are likely to be harmed. Verizon considered that, at a minimum, Eircom should be required to offer HB TI WHQA products and to maintain cost transparency and product stability for the period of this market review.

The declining demand for the LB TI WHQA products was not properly considered

- 5.28 Eircom considered that the declining demand for LB TI WHQA products was not properly considered by ComReg when proposing regulatory obligations in this market. Eircom was of the view that ComReg should maintain the incentives for end-user migration from LB TI LL services, referring to ComReg's 2016 Wholesale Fixed Access Services Pricing Decision⁴⁵⁴.

5.3.2 Respondents' Views on SMP assessment in the MI WHQA Market

- 5.29 8 of 12 Respondents expressed views on this issue. ComReg has summarised the Respondents' main views on the assessment of the competition in the Relevant MI WHQA Market, grouping the key issues raised into the identified themes below, namely:

⁴⁵⁴ See "Pricing of Eir's Wholesale Fixed Access Services, Response to Consultation Document 15/67 and Final Decision, [ComReg Document 16/39, Decision D03/16](#), 18 May 2016" (the 'Wholesale Fixed Access Services Pricing Decision').

- (a) Issues surrounding the deregulation of the MI WHQA Market (discussed in paragraphs 5.30 to 5.36 below);
- (b) Enet's role in the provision of WHQA services (discussed in paragraphs 5.37 to 5.38 below);
- (c) Over-reliance on market shares, as other indicators point towards the market power of Eircom (discussed in paragraphs 5.39 to 5.40 below); and
- (d) Potential impact of deregulation in the MI WHQA Market on the provision of backhaul services (discussed in paragraph 5.41 below).

Issues surrounding the deregulation of the MI WHQA Market

- 5.30 Airspeed, Cogent and GTT did not agree with ComReg's preliminary view that no SP has SMP in the MI WHQA Market, each referring to the lack of substitutability between wired LLs and wireless LLs and the lack of availability of fibre access SPs other than Eircom.
- 5.31 ALTO considered that ComReg's assessment did not properly follow the SMP Guidelines in that there was no appropriate assessment of competition at a subnational level. In this regard, ALTO argued that ComReg failed to properly assess competition outside of Business Parks and noted that the presence of a SPs' network in a particular area did not mean that all premises within that area are accessible. ALTO also critiqued the level of transparency in relation to the methodology used in estimating SPs' market shares and queried whether the presented results were correct.
- 5.32 BT also disagreed with ComReg's competition assessment in the MI WHQA Market and queried whether presented results were correct. BT reiterated its arguments raised in relation to ComReg's definition of the MI WHQA Markets⁴⁵⁵. BT was of the view that if Eircom has SMP in the LB TI WHQA Market, it would have the same market power in the MI WHQA Market and argued that a different MI WHQA market definition would lead to Eircom having SMP in the provision of MI WHQA LLs.

⁴⁵⁵ See section 4.3 above.

- 5.33 Enet disagreed that no SP has SMP in the MI WHQA Market and argued that ComReg should have carried out an SMP assessment in a combined TI/MI WHQA Market as well as arguments in relation to the market definition.⁴⁵⁶ Likewise, Enet also reiterated arguments that it raised in relation to ComReg's definition of the WHQA Markets⁴⁵⁷ and outlined, in its view, the likely outcomes in the absence of regulation.
- 5.34 HEAnet disagreed with ComReg's assessment of competition in the MI WHQA Market and noted that, outside of Business Parks and major cities, all SPs seeking fibre based WHQA products depend on Eircom to a certain extent.
- 5.35 Verizon reiterated its view that only Eircom, BT and Enet can provide WHQA services nationwide. Verizon also referred to difficulties it experienced when purchasing WHQA products from Eircom, Enet's dependency on Eircom's network and the high price level of Ethernet LLs relative to similar products in other EU Member states.
- 5.36 Vodafone disagreed that no SP has SMP in the MI WHQA Market and considered that ComReg's assessment did not follow the SMP Guidelines and did not properly assess all of the available data. Vodafone also reiterated its view that wireless LLs should be excluded from the Relevant WHQA Markets and highlighted its dependency on Eircom's network.⁴⁵⁸

Enet's role in the provision of WHQA services

- 5.37 ALTO considered that ComReg had misinterpreted Enet's role in the provision of WHQA services. In ALTO's view, Enet is a competitive wholesale SP providing LL services at both retail and wholesale level rather than an entity providing wholesale services on the publicly owned MANs. ALTO reiterated its view in relation to the treatment of dark fibre services⁴⁵⁹ and called for a reconsideration of the entire market analysis.
- 5.38 BT reiterated its views in relation to dark fibre treatment in ComReg's assessment⁴⁶⁰ and argued that Enet should also be designated with SMP (in addition to Eircom). BT supplemented its response with maps of available access infrastructure in several geographic areas.

⁴⁵⁶ See paragraph 4.38 above

⁴⁵⁷ See section 4.3 above.

⁴⁵⁸ See paragraphs 4.27 to 4.28 above

⁴⁵⁹ See paragraphs 4.30 to 4.32 above.

⁴⁶⁰ See paragraphs 4.31 to 4.32 above.

Over-reliance on market shares as other indicators point towards market power of Eircom

- 5.39 Vodafone argued that ComReg had attached too much weight to market share evidence in its competition assessment, as other indicators of market power such as the ubiquity of Eircom's network, vertical integration and Eircom's suggested dominance in related broadband and voice markets pointed towards Eircom having market power in the MI WHQA Market.
- 5.40 BT referred to ubiquity of Eircom's network as being a critical advantage in the provision of WHQA services.

Potential impact of deregulation in the MI WHQA Market on the provision of backhaul services

- 5.41 Enet, Virgin Media and Vodafone argued that the deregulation of the MI WHQA Market would lead to non-availability of backhaul services in areas where only Eircom's network is present.

5.4 ComReg's Assessment of Respondents' Views

- 5.42 Below ComReg assesses Respondents views as follows:
- (a) Respondents' views on the SMP assessment in the TI WHQA Markets are considered in paragraphs 5.43 to 5.54 below; and
 - (b) Respondents' views on the SMP assessment in the MI WHQA Market are considered in paragraphs 5.55 to 5.76 below.

5.4.1 ComReg's assessment of Respondents' views on the competition assessment in the TI WHQA Markets

- 5.43 In paragraphs 5.24 to 5.28 above, ComReg summarised the key issues raised by Respondents concerning ComReg's preliminary competition analysis and assessment of SMP in the Relevant TI WHQA Markets. Below, ComReg assesses Respondents' views under each of the key themes identified in paragraph 5.24 above, in particular:
- (a) Issues surrounding deregulation of the HB TI WHQA Market (discussed in paragraphs 5.44 to 5.47 below); and
 - (b) The declining demand for the LB TI WHQA products was not properly considered (discussed in paragraphs 5.48 to 5.50 below).

Issues surrounding the deregulation of the HB TI WHQA Market

5.44 ComReg disagrees with Verizon's view as summarised in paragraph 5.27 above that Eircom should be designated with SMP in the HB TI WHQA Market. In the 2016 Consultation⁴⁶¹ ComReg noted that, absent regulation,⁴⁶² BT was the largest provider of HB TI WHQA services, with a hypothetical market share of [\geq ██████████]⁴⁶³ at the end of 2015. More recent information based on SP responses to SIRs and set out in Figure 14 below indicates that BT continues to be the largest supplier of HB TI WHQA products, with a hypothetical market share of [\geq ██████████]⁴⁶⁴ at the end of 2016, showing a decline on the 2015 figures. Eircom's hypothetical market share was [\geq ██████████] in 2014 and is substantially lower than that of BT's⁴⁶⁵. Hence, at the end of 2016, no SP had a market share of over 50% that would in itself lead to a (rebuttable) presumption that a SP had SMP⁴⁶⁶ in the HB TI WHQA Market.

⁴⁶¹ See paragraphs 6.99 to 6.107 of the 2016 Consultation.

⁴⁶² Hypothetical shares absent regulation refers to the On-net supply at both the retail and wholesale level.

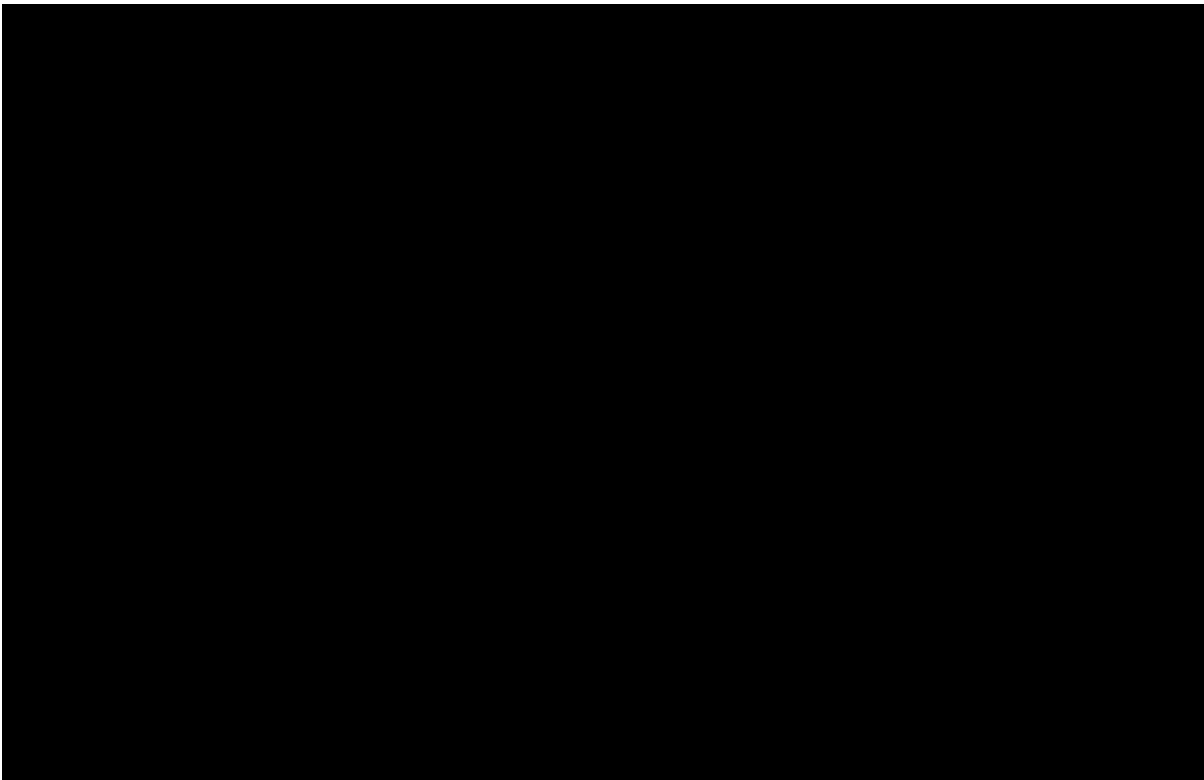
⁴⁶³ Less than 50%.

⁴⁶⁴ Less than 40%.

⁴⁶⁵ Less than 30%.

⁴⁶⁶ See paragraph 75 of the SMP Guidelines.

Figure 14: MGA Market Shares – HB TI WHQA Market [REDACTED]



- 5.45 Apart from this, ComReg remains of the view set out in the 2016 Consultation⁴⁶⁷ that overall market size is a relevant factor when assessing completion in a market. In this regard, ComReg notes that at the end of 2016 there were [\leq [REDACTED]]⁴⁶⁸ active HB TI LLs, down from [\leq [REDACTED]]⁴⁶⁹ at the end of 2015 (a decline of 47 albeit over a small base) and there were only [\leq [REDACTED]] circuits ordered from Eircom in 2016. Thus, ComReg remains of the view as expressed in the 2016 Consultation⁴⁷⁰ that it is highly questionable whether the HB TI WHQA Market is worthy of monopolisation, as any supra normal profits potentially earned through attempted monopolisation are likely to be relatively low⁴⁷¹.
- 5.46 Having regard to the analysis in the 2016 Consultation and the consideration of Respondents' views, it is ComReg's preliminary position that no SP is likely to have SMP and that continued regulation of this market is no longer justified or proportionate.
- 5.47 ComReg acknowledges the potential for some degree of disruption to end-users that the removal of regulation in the HB TI WHQA Market might cause. To mitigate any effects of this, a sunset period for the withdrawal of regulation from the HB TI WHQA Market was discussed in the 2016 Consultation⁴⁷² and is further considered in Section 10 below. A sunset period is being specified in order to allow Eircom's wholesale customers sufficient time to seek out alternative arrangements for the supply of HB TI WHQA products (should they decide to change supplier), whilst maintaining service continuity, thus ultimately minimising any impact of the de-regulation of the HB TI WHQA Market on SPs and ultimately end-users.⁴⁷³

⁴⁶⁷ See paragraph 6.100 of the 2016 Consultation.

⁴⁶⁸ The number is less than 180.

⁴⁶⁹ The number was between 200 - 225 in 2015, having fallen from over 275 in 2013.

⁴⁷⁰ See paragraph 6.102 of the 2016 Consultation.

⁴⁷¹ In this regard, ComReg notes European Commission's comments on this matter. In its comments on Belgian NRA's notification European Commission stated that the definition of small, declining submarkets which contain only the most captive users will inevitably lead to market characteristics which suggest the existence of high entry barriers and SMP. See Commission Decision concerning Case AT/2017/1970: call origination on the public telephone network provided at fixed location in Austria and Case AT/2017/1971: access to the public telephone network provided at fixed location for residential and non-residential users in Austria, Brussels, 6.4.2017 C(2017) 2431 final.

⁴⁷² See Section 9 of the 2016 Consultation.

⁴⁷³ See Section 10 below for more details.

The declining demand for the LB TI WHQA products was not properly considered

- 5.48 ComReg does not agree with Eircom's comments referred to in paragraph 5.28 above that the declining demand for LB TI WHQA products was not sufficiently considered in the 2016 Consultation. While the demand for new installations of LB TI WHQA products is relatively low, as noted in paragraphs 3.85 to 3.88 above and in the 2016 Consultation⁴⁷⁴, there remains a small but significant base of installed active LB TI LLs. Moreover, having regard to these trends, in the 2016 Consultation⁴⁷⁵ ComReg expressed its preliminary view that existing regulatory obligations (imposed under the 2008 Decision) with respect to requirements upon Eircom to provide access to certain LB TI WHQA products (such as wholesale analogue LLs, wholesale end-to-end digital leased lines and wholesale Channelised E1 (2Mb/s) Access⁴⁷⁶ LL services) should be removed, in particular, given proportionality considerations. ComReg considered that low demand and total volumes for these products, along with the continued imposition of regulatory obligations with respect to PPCs merits the withdrawal of regulatory obligations for these products.
- 5.49 In relation to market share trends, Figure 15 below indicates that Eircom continues to have a high and persistent hypothetical market share in the LB TI WHQA Market. At the end of 2016 Eircom's market share was [\geq █████] ⁴⁷⁷ up slightly from [\geq █████] ⁴⁷⁸ at the end of 2015. ComReg also notes that Eircom's existing competitors continue to be heavily dependent on Eircom's wholesale products when providing retail LB TI LL services. Overall, at the end of 2016, [\geq █████] ⁴⁷⁹ of retail LB TI LLs provided by Eircom's competitors depended on the use of wholesale inputs supplied by Eircom.

⁴⁷⁴ See paragraphs 3.30 to 3.31 of the 2016 Consultation.

⁴⁷⁵ See paragraphs 8.28 to 8.29 of the 2016 Consultation.

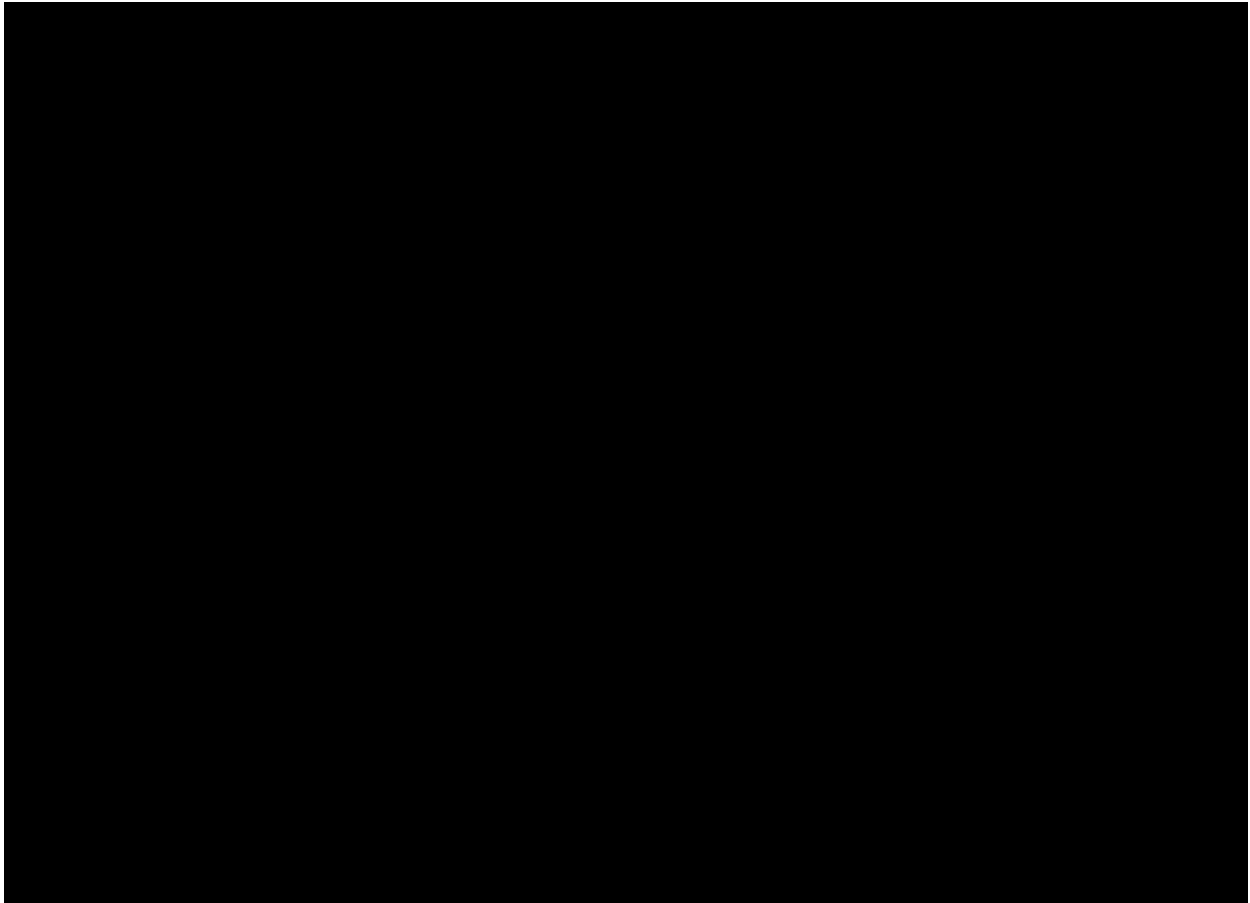
⁴⁷⁶ This is the wholesale product listed in Issue 1.0 of Eircom's "Wholesale Leased Line Product Description" as currently published on its wholesale website as distinct to E1 Channelised Links required for the delivery of sub 2Mb/s PPC EULs.

⁴⁷⁷ Greater than 75%.

⁴⁷⁸ Greater than 75%.

⁴⁷⁹ Over 55%. In 2015 the figure was [\geq █████].

Figure 15: MGA Market Shares – LB TI WHQA Market [REDACTED]



5.50 ComReg notes Eircom's views on maintaining the incentives for end-user migration from LB TI WHQA services. As discussed in more detail in Section 7 below concerning remedies, ComReg's preliminary position is that maintaining existing prices for regulated LB TI WHQA is the most prudent approach to ensure regulatory certainty for both wholesale and retail customers for the review period.⁴⁸⁰

⁴⁸⁰ See paragraphs 7.95 to 7.122 below.

Preliminary Positions on the SMP Assessment in the TI WHQA Markets

Preliminary Positions on the SMP Assessment in the HB TI WHQA Markets

- 5.51 In summary, having regard to the analysis in the 2016 Consultation and, in particular, the assessment of existing competition, potential competition and the strength of CBP⁴⁸¹, as well as the consideration of Respondents' views above⁴⁸², ComReg maintains its preliminary view with respect to the competition assessment in the HB TI WHQA Market, as set out in the 2016 Consultation.
- 5.52 ComReg's preliminary position, therefore, is that no SP is likely to have SMP in the HB TI WHQA Market and that, consequently, this market should no longer be susceptible to ex ante regulatory intervention due to the negligible volume and the fact that no SP has a high market share. As such, ComReg proposes to withdraw regulation of HB TI WHQA products. The period for such withdrawal is considered further in Section 10 below.

Preliminary Position on the SMP Assessment in the LB TI WHQA Markets

- 5.53 In summary, having regard to the analysis in the 2016 Consultation and, in particular, the assessment of existing competition, potential competition and the strength of CBP⁴⁸³, as well as the consideration of Respondents' views⁴⁸⁴, ComReg maintains its preliminary position with respect to competition assessment in the LB TI WHQA Market, as set out in the 2016 Consultation.
- 5.54 ComReg, therefore, is of the preliminary view that ex ante regulation is justified within the LB TI WHQA Market and that Eircom should be designated as having SMP in this market.

⁴⁸¹ See paragraphs 6.99 to 6.107 of the 2016 Consultation.

⁴⁸² See paragraphs 5.43 to 5.47 of this Further Consultation.

⁴⁸³ See paragraphs 6.25 to 6.98 of the 2016 Consultation.

⁴⁸⁴ See paragraphs 5.48 to 5.50 of this Further Consultation.

5.5 ComReg's Assessment of Respondents' Views on the Competition Assessment in the MI WHQA Market

- 5.55 In paragraphs 5.29 to 5.41 above, ComReg summarised the key issues raised by Respondents concerning ComReg's preliminary views on the competition analysis and assessment of SMP in the MI WHQA Market. Below, ComReg assesses Respondents' views under each of the key themes identified in paragraph 5.29 above, in particular:
- (a) Issues surrounding the deregulation of the MI WHQA Market (discussed in paragraphs 5.57 to 5.59 below);
 - (b) Enet's role in the provision of WHQA services (discussed in paragraphs 5.62 to 5.66 below); and
 - (c) Over-reliance on market shares as other indicators point towards market power of Eircom (discussed in paragraphs 5.67 to 5.76 below); and
- 5.56 After considering Respondents' views ComReg then goes on to revisit its competition assessment for the Zone A MI WHQA Market and Zone B MI WHQA Market in Section 5.6 below.

5.5.1 Issues surrounding the deregulation of the MI WHQA Market

- 5.57 As noted in paragraph 5.29 above, 8 of 12 Respondents expressed views on ComReg's preliminary view in the 2016 Consultation that no SP was likely to have SMP in the MI WHQA market as it was defined at the time. Most of such respondents disagreed with this assessment.
- 5.58 The issues raised by Respondents included the view that there were many premises to which it would not be possible for SPs, other than Eircom, to provide wholesale and/or retail MI HQA services. As such, those SPs could be foreclosed from competing in the MI WHQA and/or retail MI LL's market. Respondents also raised issues concerning the substitutability of wireless LLs for fibre LLs and the adequacy of the definition of the MI WHQA Market from a geographic perspective.

- 5.59 ComReg is of the view that these issues relate to the definition of the MI WHQA Market as then set out in the 2016 Consultation, and have been considered and addressed in the context of the updated product and geographic assessment of the MI WHQA Market in Section 4.4.4 above. ComReg has considered these views and, alongside the further evidence gathered through the engagement with Respondents and with Multi-site retail LL customers, has proposed to revise the definition of the MI WHQA Market in terms of both its product and geographic scope.⁴⁸⁵ In this respect ComReg has proposed to exclude wireless WHQA LLs from the product market and has also proposed two separate markets from a geographic perspective.
- 5.60 ComReg disagrees with ALTO's and Vodafone's view that ComReg has failed to follow the SMP Guidelines. While we respect that Respondents' may disagree with the outcome of analysis, as evidenced in the 2016 Consultation and this Further Consultation, ComReg considers that it has appropriately considered and given due weight to the various criteria set out in the SMP Guidelines and has analysed them appropriately.
- 5.61 With respect to ALTO's comments on the transparency of data in the 2016 Consultation, ComReg sought to balance the need of protecting the potential confidentiality of individual SP information, while at the same time providing evidence to support this analysis. In this respect, where information has been redacted we sought, within footnotes, to provide an indicative ranges for the relevant data. As noted in the 2016 Consultation⁴⁸⁶, and in paragraph 1.67 above we also provide an opportunity for individual SPs who wish to review their own redacted information to make a request for such in writing to ComReg.

5.5.2 Enet's role in the provision of WHQA services

- 5.62 ComReg notes ALTO's and BT's comments regarding Enet's role in the provision of MI WHQA services (and retail LL services) as summarised in paragraphs 5.37 to 5.38 above. In Section 4 above (and in the 2016 Consultation) ComReg considered publicly owned MAN infrastructure as being a State aid regulated open wholesale access network⁴⁸⁷ and set out its reasons for the inclusion of Enet's related MI WHQA LLs within ComReg's assessment.

⁴⁸⁵ See paragraph 4.266 of this Further Consultation.

⁴⁸⁶ See paragraph 1.57 of the 2016 Consultation.

⁴⁸⁷ See paragraphs 4.96 to 4.97 of this Further Consultation.

- 5.63 In contrast, Enet's private MAN network in Castlebar and additional network [REDACTED] are treated as private infrastructure and so treated such network inputs in the same manner as all other privately owned networks. ComReg has adopted the same approach in its assessment of the geographic scope of the MI WHQA Markets as set out in detail in Section 4 of this Further Consultation. In particular, ComReg considered the treatment of publicly owned MANs and privately owned MANs in its geographic market assessment in Section 4.
- 5.64 Furthermore, ComReg notes that Enet's parent company Granahan McCourt Capital acquired Airspeed in November 2014⁴⁸⁸ and for the purposes of this Further Consultation, ComReg treats Enet's and Airspeed's WHQA sales as sales of a single, vertically integrated entity. As a result, Enet's and Airspeed's on-net market shares are combined when assessing the strength of existing competition in the MI WHQA market(s). Thus, contrary to ALTO's view, ComReg considers that Enet's role both as the MSE responsible for managing, maintaining and operating MANs on behalf of the State and as vertically integrated entity selling WHQA products over privately owned infrastructure is appropriately taken into consideration in ComReg's assessment of SMP in the Relevant WHQA Markets.

⁴⁸⁸ See <http://www.techcentral.ie/granahan-mccourt-capital-acquires-airspeed-telecom/>.

- 5.65 In relation to BT's comment that both Enet and Eircom can potentially be designated with SMP, ComReg notes that, having regard to the consideration of the issues in this Section 5 there is no material evidence to suggest that Eircom and Enet are jointly dominant in either the Zone A MI WHQA Market or Zone B MI WHQA Market (and no such evidence was adduced by BT in its Submission). ComReg reiterates that its understanding is that Enet, as the MSE, is required (pursuant to the EC's State Aid approval) to sell all products on a fair, transparent, non-discriminatory and equal basis to all Access Seekers. Furthermore, Department of Communications, Climate Action and Environment ('**DCCA**E') sets the maximum price that Enet can charge for WHQA products sold using publicly owned MAN infrastructure. Hence, Enet's ability to set prices above these levels for these products is limited⁴⁸⁹. Market share evidence indicates that in the Zone A MI WHQA Market Eircom has a [\leq [REDACTED]]⁴⁹⁰ market share while Enet has a [\leq [REDACTED]]⁴⁹¹ market share with BT and Virgin Media also having market share in excess of 10%. Given the number of competing SPs, it does not suggest that co-ordinated behaviour between Eircom and Enet in the Zone A MI WHQA Market is likely, although each case would need to be considered having regard to available evidence.
- 5.66 Having regard to the analysis in the 2016 Consultation and the above consideration of Respondents' views, ComReg's preliminary position is that Enet's role as both a MSE and vertically integrated Undertaking selling MI WHQA products over State owned and privately owned infrastructure is appropriately taken into account in ComReg's assessment of SMP in the Relevant WHQA Markets.

5.5.3 Over-reliance on market shares as other indicators point towards market power of Eircom

- 5.67 ComReg notes Vodafone's and BT's comments in paragraphs 5.39 to 5.40 above suggesting that ComReg's assessment gave too much weight to market share evidence in its competition assessment.

⁴⁸⁹ ComReg understands that Enet is allowed to set lower prices as the regulation specifies maximum prices

⁴⁹⁰ Less than 45%.

⁴⁹¹ Less than 20%.

- 5.68 ComReg disagrees with Respondents' views. Other factors relevant to existing competition in the MI WHQA Market, as well as potential competition and the strength of CBP were assessed in the 2016 Consultation⁴⁹². These included inter alia vertical integration, strength of existing competitors, barriers to expansion, indirect constraints, pricing behaviour and barriers to entry/expansion.
- 5.69 In relation to Eircom's network ubiquity and any advantage in terms of economies of scale, ComReg notes that in the 2016 Consultation it was acknowledged that the presence of alternative networks has increased, particularly in areas of high business activity where there is likely to be more demand for retail MI LLs⁴⁹³. While owners of alternative wired infrastructure have not replicated the ubiquity of Eircom's network, ComReg considered at that time that SPs of wireless LLs are exerting an effective competitive constraint on Eircom. It was also noted that Airspeed and Digiweb have nationwide coverage⁴⁹⁴ and, thus, enjoy the same economies of scale as Eircom.
- 5.70 However, in light of ComReg's further preliminary view to amend the WHQA product market definition and, in particular, to exclude wireless LLs from the Relevant WHQA Markets, ComReg has performed a "network reach" analysis⁴⁹⁵ to identify how much rival physical infrastructure is present in an SA.
- 5.71 Table 16: below presents network reach evidence based on the proximity of Multi-site retail LL customers' premises to within 100 metres⁴⁹⁶ of SPs' network infrastructure in both the Zone A and Zone B SAs.⁴⁹⁷
- 5.72 While ComReg acknowledges that some of these premises might not be currently connected with LLs, it considers that this subset of non-residential commercial premises is a reasonable approximation to identify potential demand for LLs, given that these premises are occupied by businesses already purchasing LL services for some of their locations.

⁴⁹² See paragraphs 6.122 to 6.141 of the 2016 Consultation.

⁴⁹³ See paragraph 5.208 of the 2016 Consultation.

⁴⁹⁴ See paragraph 5.214 of the 2016 Consultation.

⁴⁹⁵ See Table 16: Network coverage in terms of multi-site retail LL customers' premises December 2016.

⁴⁹⁶ See paragraphs 4.159 to 4.160 for the explanation of why 100 metres distance criteria was chosen to identify Zone A and Zone B SAs.

⁴⁹⁷ See <https://www.eircode.ie/business/products-and-services> for more details.

5.73 Table 16: illustrates that the combined reach of Alternative Networks at these locations is 96% of all Multi-site retail LL customers' premises located in the Zone A MI WHQA Market, with Virgin Media, Enet and BT each covering in excess of 40% of such premises. In contrast, the combined reach of alternative networks in the Zone B MI WHQA Market is 29.4% (mostly accounted by Virgin Media). This compares to Eircom's assumed coverage of 90% - 100% in this geographic market.⁴⁹⁸ Thus, network reach evidence clearly demonstrates that Eircom is more likely to be capable of greater network reach advantages in the Zone B MI WHQA Market relative to alternative networks.

⁴⁹⁸ Based on the fact that Eircom has a near ubiquitous access network.

**Table 16: Network coverage in terms of multi-site retail LL customers' premises
December 2016 [PARTIALLY REDACTED]**

	Number of multi-site retail LL customers' premises within 100m of SPs' network		
	Zone A MI WHQA Market	Zone B MI WHQA Market	Total
Eircom (assumed ubiquitous network coverage)	90 - 100%	90 - 100%	90 - 100%
Alternative networks (combined reach)	90 - 100% [REDACTED]	20 - 30% [REDACTED]	40 - 50% [REDACTED]
Virgin Media	60 - 70% [REDACTED]	20 - 30% [REDACTED]	30 - 40% [REDACTED]
Enet	60 - 70% [REDACTED]	0 - 10% [REDACTED]	20 - 30% [REDACTED]
BT	40 - 50% [REDACTED]	0 - 10% [REDACTED]	10 - 20% [REDACTED]
Magnet	20 - 30% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
Aurora	10 - 20% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
Vodafone	10 - 20% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
ESBT	10 - 20% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
Colt	10 - 20% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
Viatel /Digiweb (fibre network)	10 - 20% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
Verizon	10 - 20% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
EU Networks	10 - 20% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
Siro	0 - 10% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
GTT	0 - 10% [REDACTED]	0 - 10% [REDACTED]	0 - 10% [REDACTED]
Number of premises	4,349	11,097	15,446

5.74 In relation to Vodafone's comments on Eircom's advantage in terms of its vertically integrated position, ComReg remains of the view set out in the 2016 Consultation⁴⁹⁹ that there are many vertically integrated SPs operating at both the wholesale and retail level in the relevant MI WHQA Markets.

⁴⁹⁹ See paragraph 6.123 of the 2016 Consultation.

- 5.75 ComReg notes Vodafone's comments on Eircom's 'dominance' in related voice and broadband markets. In line with the MGA approach, in the 2016 Consultation ComReg has considered the presence of regulation in other related markets⁵⁰⁰. In particular, ComReg considered that, absent regulation in the MI WHQA Market, Eircom's competitors would be able to get access to regulated products in voice and broadband markets, thus limiting Eircom's ability to leverage its SMP position in these markets into the MI WHQA Market. ComReg must consider whether any SP has market power in the market being examined, namely the MI WHQA Markets. Additionally, ComReg, in the definition of the Relevant WHQA Markets in Section 4, has formed the view that broadband services are not part of these markets.
- 5.76 Finally, ComReg does not agree with Vodafone's view that Eircom has 'dominance' in terms of the provision of services to Government agencies. While, Eircom supplies a variety of services to public sector organisations (including, but not limited to retail MI LLs), ComReg notes that Eircom's competitors are actively competing for public sector contracts and are providing a significant number of retail MI LLs to public sector customers as evident from information obtained via SIRs. ComReg also considers that defining the Relevant MI WHQA Markets by customer type would not likely be appropriate in the circumstances of this analysis given the analysis has included an assessment of the number of competing infrastructures at premises locations (amongst other factors).

5.6 Assessment of Competition in the Relevant MI WHQA markets

- 5.77 In this section ComReg sets out its further preliminary view on the assessment of competition in the Relevant MI WHQA markets – namely the Zone A MI WHQA market and the Zone B MI WHQA market. ComReg is of the further preliminary view that no SP is likely to have SMP in the Zone A MI WHQA market and Eircom is likely to have SMP in the Zone B MI WHQA market.
- 5.78 This section is set out as follows;
- (a) First, in Section 5.6.1 ComReg gives an overview of its approach to assessing competition in the Relevant MI WHQA market,
 - (b) Then, in Section 5.6.2, ComReg details its assessment of competition in the Zone A MI WHQA market,

⁵⁰⁰ For example, regulation for the market Wholesale central access for mass-market products provided at a fixed location ('WLA').

- (c) Next, in Section 5.6.3, ComReg details its competition assessment in the Zone B MI WHQA market, and
- (d) Finally, Section 5.7 sets out ComReg's overall preliminary conclusions.

5.6.1 Overview

5.79 The European regulatory framework for electronic communications networks and services has aligned the concept of SMP with the competition law definition of dominance advanced by the Court of Justice of the European Union in *United Brands v. Commission*⁵⁰¹:

“The dominant position referred to [by Article 102 of the Treaty on the Functioning of the European Union] relates to a position of economic strength enjoyed by an Undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers.”

5.80 Article 14(2) of the Framework Directive⁵⁰² effectively mirrors this definition of dominance and states that:

“An Undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.”

5.81 Arising from this definition, ComReg assesses whether SMP exists in accordance with the framework established by the European Commission.

5.82 The European Commission's SMP Guidelines, of which ComReg is required to take utmost account⁵⁰³, refer to a range of criteria that may be considered by National Regulatory Authorities ('NRAs') when seeking to establish whether any Undertaking(s) has SMP in a relevant market.

⁵⁰¹ Case 27/76 *United Brands v European Commission* [1978] ECR 207, Paragraph 65. See also paragraph 70 of the [SMP Guidelines](#).

⁵⁰² Which is transposed into Irish law by Regulation 25(1) of the Framework Regulations.

⁵⁰³ In accordance with Regulation 25(2) of the Framework Regulations.

5.83 The SMP Guidelines state that according to established case-law, very large market shares (that is, market shares in excess of 50%) are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position:

*“According to established case-law, very large market shares — in excess of 50% — are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position. An Undertaking with a large market share may be presumed to have SMP, that is, to be in a dominant position, if its market share has remained stable over time”*⁵⁰⁴

5.84 Furthermore, the SMP Guidelines state that:

- (a) single dominance concerns normally arise where market shares exceed 40%;
- (b) concerns can also arise at lower shares depending on the difference between the market shares of the Undertaking in question and that of its competitors; and;
- (c) Undertakings with market shares of no more than 25% are not likely to enjoy a (single) dominant position on the market concerned.⁵⁰⁵

5.85 Market shares in excess of 50% therefore, give rise to a strong presumption of SMP.⁵⁰⁶ However, the SMP Guidelines also state that the existence of a high market share alone is not sufficient to establish the existence of SMP; rather it means that the Undertaking concerned might be in a dominant position and this needs to be considered alongside other potentially relevant criteria for assessing the existence of SMP, including the following:⁵⁰⁷

- (a) Overall size of the Undertaking;
- (b) Control of infrastructure not easily duplicated;
- (c) Technological advantages or superiority;
- (d) Absence of or low countervailing buyer power;
- (e) Easy or privileged access to capital markets/financial resources;
- (f) Product/services diversification (e.g. bundled products or services);
- (g) Economies of scale;
- (h) Economies of scope;

⁵⁰⁴ Paragraph 75 of the SMP Guidelines.

⁵⁰⁵ Ibid.

⁵⁰⁶ Ibid.

⁵⁰⁷ Paragraph 78 of the SMP Guidelines.

- (i) Vertical integration;
- (j) A highly developed distribution and sales network;
- (k) Absence of potential competition; and
- (l) Barriers to expansion.

5.86 The relative importance of each factor may vary from one analysis to the next as the characteristics or dynamics of the relevant market under examination change. Consequently, flexibility is needed in applying the above criteria. In addition, many of the above factors, while presented separately, may in fact be interrelated and all available evidence is considered by ComReg as a whole before a determination on SMP is made. In this respect, the SMP Guidelines note that:⁵⁰⁸

“A dominant position can derive from a combination of the above criteria, which taken separately may not necessarily be determinative.”

Approach to Assessing SMP in the Relevant WHQA Markets

5.87 ComReg’s approach to assessing whether an Undertaking has SMP in the Relevant WHQA Markets is to carry out a forward looking analysis on the basis of existing and likely future market conditions⁵⁰⁹ and to consider the range of factors identified above that are of most relevance to these markets.

Relevant SMP Criteria

5.88 For the purposes of the analysis of the Relevant WHQA Markets, ComReg considers that the following criteria are of most relevance to the SMP assessment in these markets:

- (a) Overall size of the Undertaking;
- (b) Control of infrastructure not easily duplicated;
- (c) Absence of or low countervailing buyer power;

⁵⁰⁸ Paragraph 79 of the SMP Guidelines.

⁵⁰⁹ Paragraph 20 of the SMP Guidelines states that “In carrying out the market analysis NRAs will conduct a forward looking, structural evaluation of the relevant market, based on existing market conditions. NRAs should determine whether the market is prospectively competitive, and thus whether any lack of effective competition is durable, by taking into account expected or foreseeable market developments over the course of a reasonable period. The actual period used should reflect the specific characteristics of the market and the expected timing for the next review of the relevant market by the NRA. NRAs should take past data into account in their analysis when such data are relevant to the developments in that market in the foreseeable future.”

- (d) Product/services diversification (e.g. bundled products or services);
- (e) Economies of scale and scope;
- (f) Vertical integration;
- (g) Absence of potential competition; and
- (h) Barriers to expansion.

5.89 It should also be noted that as with the case of the 2016 Consultation, there are a number of factor that ComReg does not consider relevant to the SMP assessment for the MI WQHA market for the same reasons as set out in the 2016 Consultation.⁵¹⁰ These are;

- (a) Technological advantages or superiority;
- (b) Easy or privileged access to capital markets/financial resources; and
- (c) A highly developed distribution and sales network

Approach to Existing Regulation

5.90 In markets subject to ex-ante SMP regulation a SP's behaviour may also be restricted by way of existing SMP regulatory controls. It is necessary, however, to consider the potential ability of the Undertaking to exert market power in the absence of ex-ante SMP regulation⁵¹¹ in the markets concerned. To do otherwise could lead to a circular finding of non-dominance on the basis of SMP regulatory remedies that would cease to exist following the completion of a market analysis and, in the absence of which, the authorised Undertaking may be able to exert market power. In the context of an SMP assessment, in the Relevant WHQA Markets, the key questions to be assessed are:

- (a) How the SP in question would be likely to behave in the markets being assessed if it were free from current or potential SMP regulatory constraints; and

⁵¹⁰ See paragraphs 6.15 to 6.20 of the 2016 Consultation

⁵¹¹ However, while discounting SMP regulation in the market concerned, other obligations (such as, for example, relevant SMP remedies existing in other markets, or obligations relating to general consumer protection) are assumed to be in place.

- (b) How the SP in question would be likely to behave in the market being assessed having regard to the existence of any SMP and other obligations in related markets which could impact in the Relevant WHQA Markets.⁵¹²

Assessment of Competition and SMP

5.91 Each of the relevant factors identified in paragraph 5.88 above is considered in detail below. Given an inherent degree of overlap, ComReg proposes to combine its assessment of these factors under the following three broad headings:

- (a) **Existing competition in the Relevant WHQA Markets:** an assessment of factors such as vertical integration, market shares, relative strength of existing competitors, barriers to expansion, indirect constraints, and pricing behaviour;
- (b) **Potential competition in the Relevant WHQA Markets:** an assessment of factors such as control of infrastructure not easily duplicated, barriers to entry in the Relevant WHQA Markets, as well as considering the overall strength of potential competitors; and
- (c) **Strength of any countervailing buyer power (CBP):** an assessment of the impact posed by any strong buyers of WHQA products on the competitive behaviour of WHQA SPs.⁵¹³

5.6.2 Assessment of Competition the in the Zone A MI WHQA Market

5.92 In this section ComReg presents its further preliminary views on the assessment of competition and SMP in the Zone A MI WHQA Market having considered Respondent's views above. In doing so ComReg further examines, in particular,

- (a) existing competition in the Zone A MI WHQA Market (discussed in paragraphs 5.94 to 5.113 below);
- (b) potential competition in the Zone A MI WHQA Market (discussed in paragraphs 5.114 to 5.117 below); and

⁵¹² In the context of the WHQA Markets, the most pertinent related market is the Wholesale Local Access ('WLA') Market (formerly the WPNIA market). This market – referred to as Market 3a; Wholesale Local Access – is currently under review by ComReg and a consultation and draft decision is due in Q3 2016.

⁵¹³ It should be noted that where it found that existing competition is sufficient to ascertain that an Undertaking is not likely to have SMP in a relevant market, then the competitive constraint imposed by likely potential competition and countervailing buyer power are of relatively less importance with the exception markets where there is a concern that the existing competition may not be stable.

(c) CBP in the Zone A MI WHQA Market (discussed in paragraphs 5.118 to 5.125 below).

5.93 ComReg is of the preliminary view that the evidence on existing and potential competition is suggestive that it is unlikely that any SP has SMP in the Zone A MI WHQA Market and that this is likely to remain the case over the lifetime of this market review.

Existing Competition in the Zone A MI WHQA Market

5.94 Below ComReg examines factors such as market shares, vertical integration, the relative strength of existing competitors, barriers to expansion, indirect constraints, and pricing behaviour.

5.95 From the outset, it should be noted that the delineation of the geographic scope of the relevant MI WHQA markets was predicated – in part – on the availability of alternative sources of supply in a given Small Area (SA) that could readily serve the majority demand or potential demand in that area.⁵¹⁴ As such ComReg is of the further preliminary view that barriers to entry have been overcome in the Zone A MI WHQA and that as such existing competition is likely to be strong relative to the Zone B MI WHQA market.

Market shares in the Zone A MI WHQA Market

5.96 As noted in paragraph 4.165 above, ComReg's market share estimation in the MI WHQA Market(s) is based on the count of premises connected to SPs' networks and being supplied with services based on MI WHQA products. ComReg maintains the approach adopted in the 2016 Consultation and includes self-supply to retail arms of vertically integrated WHQA SPs in market share estimations. Eircom's self-supply to its mobile arm and Tetra, as well as MNOs supply of LL connectivity to their own downstream mobile operations is excluded from market share estimations as such supply is considered to be captive.⁵¹⁵

⁵¹⁴ i.e. 75% of relevant premises are within 100 metres of three or more sources of MI WHQA supply. See paragraphs 4.158 to 4.165 above for more details.

⁵¹⁵ See paragraph 4.39 for more details.

- 5.97 Market shares are presented in Table 17 below, and show the hypothetical (absent regulation) market shares for premises connected with wired MI WHQA products at the end of Q4 2016⁵¹⁶. ComReg estimates that there is a total of 6,270 such premises representing just over 65% of the overall Relevant MI WHQA Markets. It illustrates that Eircom has the largest market share in the Zone A MI WHQA Market, at [%<REDACTED]⁵¹⁷.
- 5.98 Table 17 also illustrates that there are a number of other SPs who held market shares above 10% including BT [%<REDACTED], Enet⁵¹⁸ [%<REDACTED] and Virgin Media [%<REDACTED].
- 5.99 In ComReg's preliminary view, Eircom's market share, along with the small but significant market shares spread across other SP's may be suggestive of any SP having market power. However, this needs to be considered alongside the other factors considered below.

Table 17: Zone A MI WHQA Market Shares 2016 [%<PARTIALLY REDACTED]

Operators	Zone A	Zone A Shares
Eircom	[%<REDACTED]	[%<REDACTED]
BT	[%<REDACTED]	[%<REDACTED]
Virgin Media	[%<REDACTED]	[%<REDACTED]
ENET CMAN	[%<REDACTED]	[%<REDACTED]
Magnet	[%<REDACTED]	[%<REDACTED]
OAOS	[%<REDACTED]	[%<REDACTED]
Total	6,303	100%

⁵¹⁶ As noted in Section 1.6 above, information in relation to connected premises was not collected in SIRs in a specific format prior to 2017 SIRs. Thus, information on the evolution of market shares in terms of connected premises is not available. However, they will be updated with 2017 data prior to a final decision.

⁵¹⁷ Less than 45%.

⁵¹⁸ ComReg notes that Enet's market share includes Airspeed's market share.

- 5.100 As indicated in Section 4.4.4 and highlighted in Table 16 above, all of Eircom's main competitors for the supply of MI WHQA LLs have their own wired network infrastructure, many with a relatively wide geographic coverage in Zone A, although not as wide as Eircom's. While the ubiquity of Eircom's network has not been replicated by any alternative network, Table 16 indicates that Virgin Media, Enet and BT each cover in excess of 40% of Multi-site retail LL customers' premises, with an alternative network combined reach of over 90% Furthermore, as all these SPs are active in the MI WHQA market, this suggests that, absent Eircom, other SPs can purchase MI WHQA services over a wide coverage area, albeit potentially from multiple alternative networks.
- 5.101 ComReg also highlights the particular importance of the State owned MANs network infrastructure operated by Enet, where wholesale open access at 94 urban centres is available to Access Seekers.⁵¹⁹
- 5.102 The strength of Eircom's competitors is also evidenced by the relatively low Access Seeker dependency on Eircom for MI WHQA LL inputs for the provision of retail and/or wholesale MI LL services in the Zone A MI WHQA Market. In this regard ComReg notes that overall, [\leq [REDACTED]]⁵²⁰ of premises connected by alternative SPs, were on the basis of using Eircom's MI WHQA inputs in the Zone A MI WHQA Market.

Consideration of other factors relevant to existing competition in the Zone A MI WHQA Market

- 5.103 Other factors considered by ComReg include vertical integration, relative strength of existing competitors, barriers to expansion, indirect constraints, and pricing behaviour.

⁵¹⁹ ComReg notes the exception of publically owned MANs that are reliant on Eircom to supply MI WHQA for the purposes of backhaul. However, these MANs are exclusively in the Zone B MI WHQA market.

⁵²⁰ Less than 30%.

Vertical Integration

5.104 The consideration of vertical integration was set out in the 2016 Consultation⁵²¹. In relation to the Zone A MI WHQA Market, there are many vertically integrated SPs operating at both the wholesale and retail level. Thus, existing competitors have already entered retail and wholesale markets to pose a degree of competitive constraint on Eircom. As such, it is ComReg's preliminary view that no SP is in a position where it is likely to be able to leverage its vertically integrated position to the detriment of competition in the Zone A MI WHQA

Strength of Existing Competitors

5.105 As can be seen from Table 17 above, there are four SPs with market shares of over 10% and no SP has a market share in excess of 45%. As such, it is ComReg's preliminary view that there is no SP that enjoys a market position that is sufficiently strong as to not be competitively constrained by its rivals. Furthermore, the HHI index for the Zone A MI WHQA market is 2,290 which is indicative of moderate concentration.⁵²²

Barriers to Expansion

5.106 ComReg considers Barriers to Expansion alongside Barriers to Entry in the context of potential competition in paragraphs 5.114 to 5.117 below.

Indirect Constraints

5.107 As noted in paragraph 5.100 above, all SPs self-supplying retail MI LLs also supply MI WHQA services to Access Seekers. ComReg considered indirect constraints in the 2016 Consultation⁵²³ and noted that there are currently no retail LL SPs that utilise their own network inputs to provide those retail services who are not also active in the supply of MI WHQA LLs. ComReg was of the preliminary view that that indirect constraints are not a relevant consideration in defining the relevant WHQA market as they have been already accounted for in the context of the assessment of direct constraints.

5.108 As such, indirect constraints were identified as not being a consideration for the SMP assessment in the Zone A MI WHQA Market. ComReg maintains this view.

⁵²¹ See paragraph 6.35 of the 2016 Consultation.

⁵²² See paragraph 4.223 for details

⁵²³ See paragraphs 5.131 to 5.135 of the Consultation.

Pricing Behaviour

- 5.109 The development and extent of competition in a market over time may be evident in the pricing of WHQA products, services and facilities. In an SMP assessment, the ability of an SP to behave, to an appreciable extent, independently of the pricing behaviour of its competitors may be suggestive (but not determinative in itself) of SMP when considered alongside other factors.
- 5.110 In this regard, ComReg's interviews with end-users of LLs highlighted interviewees' perception of decreasing retail MI LL prices with 10 out of 17 interviewees noting that they were able to obtain better/cheaper deals from SPs (e.g. higher bandwidth for the same price). Furthermore, in the 2016 Consultation ComReg noted that several SPs were of the view that WHQA products' pricing was competitive⁵²⁴.

Overall Preliminary views on Existing Competition in the Zone A MI WHQA Market

- 5.111 The analysis above is suggestive that there is relatively strong existing competition within the MI WHQA Market. As evidenced by the presence of independent networks, barriers to entry have, since the 2008 Decision, appear to have been largely overcome in the Zone A MI WHQA Market.
- 5.112 Furthermore, the relatively low reliance on Eircom for the provision of both MI WHQA and MI retail LL services and the extensive coverage of alternative wired networks suggests that there is increased independent infrastructure based competition at the wholesale level (and consequently at the retail level). The widespread use of Enet's MANs indicates that such infrastructure based competition is not solely confined to areas of high demand, but is widespread throughout the towns where MANs are situated.
- 5.113 As such, it is ComReg's preliminary view that relative strength of existing competition is suggestive that no SP has SMP in the Zone A MI WHQA Market. However, this also need to be considered alongside the other factors identified below.

Potential Competition in the Zone A MI WHQA Market

- 5.114 Potential competition in the Zone A MI WHQA Market is assessed having regard to factors such as control of infrastructure not easily duplicated, barriers to entry and expansion, as well as considering the overall strength of potential competitors.

⁵²⁴ Se paragraphs 6.127 of the 2016 Consultation.

- 5.115 Noting the presence of competitive constraints posed by existing competition, ComReg now assesses the likely effectiveness of any constraints likely to be posed by potential competition in the Zone A MI WHQA Market.
- 5.116 ComReg is of the preliminary view that barriers to entry have been largely overcome as evidenced from the existing infrastructure based competition. The delineation of the Zone A MI WHQA market based on the presence of rival network infrastructure along with the market shares presented in Table 17 above indicate that the Zone A MI WHQA Market has a number of strong competitors operating within it.
- 5.117 Moreover, as ComReg must take a forward looking view of competition in this assessment, it considers that the prospects for competition in the Zone A MI WHQA Market are favourable. ComReg notes that as the roll-out of the SIRO network advances, the Zone A MI WHQA Market should, to the extent it can be can be utilised to provide MI WHQA LLs, further strengthen the presence of increased independent infrastructure based competition within this market.

CBP Assessment in the Zone A MI WHQA Market

- 5.118 Strong buyers of MI WHQA products may also impact the competitive behaviour of SPs supplying MI WHQA. In assessing CBP in the Zone A MI WHQA Market, ComReg adopts the same framework set out in the 2016 Consultation with respect to the LB TI WHQA Market⁵²⁵.
- 5.119 However, it should be noted from the outset that CBP is used to ascertain if strong buyers may provide a sufficient competitive constraint on an SP who, otherwise, may be considered to have SMP. In such instances, a SP with a high market share may not be able to act independently of its competitors, customers and ultimately consumers, if its buyers have sufficient CBP.
- 5.120 In general, purchasers in WHQA markets may have a degree of buyer power where they purchase large volumes and have a credible threat to switch to an alternative supplier, or to meet requirements through self-supply. In order for the threat to be effective, the volumes that are or can credibly be met from another source of supply need to have a material impact on the supplier's profitability.

⁵²⁵ See paragraphs 6.69 to 6.94 of the 2016 Consultation.

5.121 In the case of the Zone A MI WHQA Market, the delineation of its geographic scope was predicated – in part – on the presence of alternative networks that could readily act as an alternative source of supply to the majority of current and potential demand in an SA. As such, there are a number of possible suppliers of MI WHQA, such that the threat of switching supply is credible.

Size of the Buyer and its Relative Importance to the Seller

5.122 The strength of CBP can be influenced by the relative size of the buyer, with this being measured according to the buyer's share of relevant retail MI WHQA LLs purchased from the SP relative to total purchases of all WHQA LLs from the same SP. The degree to which high shares of WHQA purchases are concentrated amongst one or more buyers could also be relevant.

5.123 However, based on the information supplied in response to the SIRs and the Qualitative Questionnaire ComReg is not aware of any retail MI LL SP having a high reliance on a particular MI WHQA provider in the Zone A MI WHQA market.

Credible Alternative Sources of Supply

5.124 As set out in paragraphs 5.96 to 5.112 above, ComReg is of the view that there are a number of SPs with own independent infrastructure competing in the Zone A MI WHQA Market. This suggests that, in many cases, Access Seekers can credibly threaten to respond to changes in commercial terms and conditions associated with the purchase of MI WHQA products by seeking an alternative sources of supply.

Further Preliminary Conclusion on CBP Assessment in the Zone A MI WHQA Market

5.125 Having regard to the analysis in paragraphs 5.118 to 5.124 above, ComReg's preliminary view is that it there is likely to be sufficient credible alternative sources of supply that no SP is in a position to effectively act independently of its customers in the Zone A MI WHQA Market.

Overall Preliminary Conclusions on Competition in the Zone A MI WHQA Market

5.126 In paragraphs 5.94 to 5.125 above, ComReg has assessed, existing competition, potential competition and CBP in the Zone A MI WHQA Market. Having regard to this analysis, it is ComReg's overall preliminary view that the available evidence is suggestive of no SP being likely to have SMP in the Zone A MI WHQA Market.

5.127 This is due, amongst other things, to market shares being distributed across a number of SPs with no SP having a market share in excess of 45%, the evidence of multiple SPs competing (and likely to continue to compete) on the basis of independent infrastructure and the extensive coverage of alternative wired networks.

5.6.3 Assessment of Competition in the Zone B MI WHQA Market

5.128 In this section ComReg presents its preliminary views on the assessment of competition and SMP in the Zone B MI WHQA Market, in particular,

- (a) existing competition in the Zone B MI WHQA Market is discussed in paragraphs 5.132 to 5.148;
- (b) potential competition in the Zone B MI WHQA Market is discussed in paragraphs 5.149 to 5.170; and
- (c) CBP in the Zone B MI WHQA Market is discussed in paragraphs 5.172 to 5.183.

5.129 ComReg is of the preliminary view that based on the assessment of existing and potential competition, as well as the assessment of CBP, it is suggestive that Eircom is likely to have SMP in the Zone B MI WHQA Market and that this is likely to remain the case over the lifetime of this market review.

Existing Competition in the Zone B MI WHQA Market

5.130 Below ComReg examines factors such as market shares, vertical integration, the relative strength of existing competitors, barriers to expansion, indirect constraints, and pricing behaviour.

5.131 However, from the outset, it should be noted that the delineation of the relevant MI WHQA markets is predicated – in part – on the existence of alternative networks capable of readily supplying MI WHQA services to the majority of demand – both current and potential. In terms of the Zone B MI WHQA market, ComReg is of the further preliminary view that barriers to entry have not been overcome as this market consists of SA where there are less than two sources of MI WHQA capable of readily supplying MI WHQA services.

Market shares in the Zone B MI WHQA Market

5.132 Market shares presented in Table 18 below show the hypothetical (absent regulation) market shares for premises connected with wired MI WHQA products at the end of Q4 2016. It illustrates that Eircom is the SP with the largest market share in the Zone B MI WHQA Market, at [REDACTED]⁵²⁶.

⁵²⁶ More than 70%. ComReg notes that Eircom's market share includes Enet's connected premises in towns where MANs have Eircom as the only viable supplier of backhaul services to them. ComReg applies the assumption that, absent regulation in the Zone B MI WHQA Market, all of Enet's customers in these areas would revert to Eircom for the purchase of MI WHQA products given the likely lack of viable alternatives. It should also be noted that Eircom's market share is in excess of 60% [REDACTED] even without the attribution to it of Enet's connected premises on the relevant MANS.

Table 18: Zone B MI WHQA Market Shares [REDACTED]

Operators	Zone B	Zone B shares
Eircom	[REDACTED]	[REDACTED]
BT	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]
ENET CMAN	[REDACTED]	[REDACTED]
Magnet	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]
Total	3,322	100%

5.133 Table 18 above also illustrates that there is no other SP who held market shares above 10% with BT [REDACTED], Enet⁵²⁷ [REDACTED] and Virgin Media [REDACTED] being the largest competitors to Eircom in the Zone B MI WHQA Market. Thus, market share evidence indicates that Eircom has a high market share which, in ComReg's view, is likely to be relatively stable given the lower level of alternative infrastructure presence in this market.

5.134 The relative lack of strength of Eircom's competitors is also highlighted by ComReg's network reach analysis set out in Table 16 above. While all of Eircom's main competitors for the supply of MI WHQA LLs have their own wired network infrastructure, this infrastructure tends to be rolled-out in areas with higher density of non-residential/commercial premises⁵²⁸. In this regard, Table 16:above indicates that Virgin Media covers less than 30% of Multi-site retail LL customers' premises, while Enet and BT each cover less than 10% of such premises in the Zone B MI WHQA Market. A combined total alternative networks' reach is less than 30% compared to over 90% in the Zone A MI WHQA Market.

5.135 Furthermore, ComReg notes the relatively high dependency by SPs on Eircom's MI WHQA LL inputs for the provision of retail and/or wholesale LL services in the Zone B MI WHQA Market. In this regard ComReg notes that overall, [REDACTED]⁵²⁹ of premises connected by alternative SPs, were on the basis using Eircom's WHQA inputs in the Zone B MI WHQA Market.

⁵²⁷ ComReg notes that Enet's market share includes Airspeed's market share.

⁵²⁸ Due to the higher demand for MI LLs in these areas.

⁵²⁹ More than 50%.

Other factors relevant to existing competition in the Zone B MI WHQA Market

5.136 Other factors considered by ComReg include vertical integration, relative strength of existing competitors, barriers to expansion, indirect constraints, and pricing behaviour.

Vertical Integration

5.137 The concept of vertical integration was set out in the 2016 Consultation⁵³⁰. In relation to the Zone B MI WHQA Market, there are fewer vertically integrated SPs operating at both the wholesale and retail level relative to the Zone A MI WHQA Market. However, due to the limited reach of their networks, existing vertically integrated competitors to Eircom are not likely to impose a sufficiently effective competitive constraint on Eircom in the Zone B MI WHQA Market. In contrast, as well as being the largest MI WHQA supplier, Eircom is also a significant provider of retail MI LLs and has the ability and incentive to leverage the market power it has in the Zone B MI WHQA market into the related MI LL market.⁵³¹

5.138 As such, it is ComReg's preliminary view that Eircom's vertically integrated structure could enhance Eircom's suggested SMP position to the detriment of competition in the Zone B MI WHQA Market or the associated retail MI LL markets.

Strength of Existing Competitors

5.139 As can be seen from Table 16: above, Eircom has market share in excess of 70% in the Zone B MI WHQA Market and there are no other SP with a market share of over 10%. The limited reach of alternative networks and relatively high dependency on Eircom when providing retail/and or wholesale MI LL services in the Zone B MI WHQA Market is suggestive that Eircom is unlikely to be effectively constrained in behaving, to an appreciable extent, independently of its competitors.

⁵³⁰ See paragraph 6.35 of the 2016 Consultation.

⁵³¹ See Section 8 for more details on competition problems below.

Barriers to Expansion

- 5.140 ComReg considers that the existence of sunk costs associated with the network roll-out and the fact that WHQA Market(s) are characterised by economies of scale, scope and density⁵³² are likely to act as significant barriers to expansion for SPs with own wired networks in this market. In this regard, ComReg notes that the demand for retail MI LLs is relatively more limited and sparsely spread throughout the Zone B MI WHQA Market. This is illustrated by the fact that the Zone B MI WHQA accounts for approximately 80% of all SAs yet only 34% of connected premises. As such, there are relatively higher costs to expansion alongside relatively lower demand in the Zone B MI WHQA market.
- 5.141 In ComReg's preliminary view, this means that a significant expansion of existing networks into the Zone B MI WHQA Market may be uneconomic due to unlikely recovery of high fixed and sunk costs associated with such a network expansion.
- 5.142 In contrast, Eircom operates a ubiquitous duct/copper/fibre network with significant aspects of these costs likely to be already sunk. A significant portion of the sunk costs that were involved in the initial construction of Eircom's access network are likely to be largely amortised at this point in time, although ongoing investment is necessary. ComReg recognises that Eircom, through its ongoing network upgrade is incurring additional costs. Any competitor expanding its network in the Zone B MI WHQA Market would, nonetheless, face higher sunk costs than that which is faced by Eircom given its existing network, including the upgrade of it.

Indirect Constraints

- 5.143 As noted in paragraph 5.100 above, all SPs self-supplying retail MI LLs also supply MI WHQA services to Access Seekers. As such, indirect constraints are not a consideration for either market definition or SMP assessment in the Zone B MI WHQA market.

⁵³² Economies of scale, scope and density refer to potential advantages that larger incumbents may enjoy over smaller new entrants. Economies of scale generally refer to the cost advantage which a large-scale operator may have over a smaller operator where the marginal cost of production decreases as the quantity of output produced increases. Economies of scope refer to the potential efficiencies which may be gained by a firm jointly producing a range of goods and services, e.g. where a CATV network or a FTTC network could be used to provide LLs, retail fixed telephony services and broadband services simultaneously. Economies of density refer to potential efficiencies associated with supplying customers who are geographically concentrated.

External Constraints

- 5.144 ComReg set out in Section 4 its reasoning for excluding dark fibre, business broadband and MI WHQA delivered over P2P radio links from the relevant MI WHQA market definition. Overall, the rationale for doing so was because of the weak substitutability between these services and MI WHQA delivered over wired media.
- 5.145 Even though they are external to the relevant MI WHQA markets, ComReg considers that they may act as a weak competitive constraint on a monopolist for some demand in the Zone B MI WHQA market. However, for the majority of demand, these services are unlikely to act as a strong enough constraint to significantly affect the market power of a monopolist in the Zone B MI WHQA market.

Pricing Behaviour

- 5.146 Given the lack of effective existing competition in the Zone B WHQA Market it is ComReg's preliminary view that, absent regulation, Eircom has both the ability and incentive⁵³³ to increase prices (above the competitive level) offered/charged to Access Seekers for MI WHQA products in the Zone B MI WHQA Market.

Preliminary conclusion on Existing Competition in the Zone B MI WHQA Market

- 5.147 Having regard to ComReg's assessment in paragraphs 5.132 to 5.146 above, ComReg's preliminary view is that, absent regulation in the Zone B MI WHQA Market, it is unlikely that Eircom would be sufficiently constrained by existing competition such that it would prevent Eircom from behaving, to an appreciable extent, independently of competitors, customers and consumers.
- 5.148 This is due to Eircom's high market share in a market characterised by limited and lowly concentrated demand for MI LLs and an absence of evidence of barriers to entry having been overcome, which is suggestive of Eircom having SMP in the Zone B MI WHQA Market. Below, ComReg considers other relevant factors (potential competition and CBP) which may have the effect of diminishing or undermining Eircom's suggested SMP position in the Zone B MI WHQA Market.

⁵³³ These abilities and incentives are discussed in Section 8 dealing with competition problems in the Zone B MI WHQA Market.

Potential Competition in the Zone B MI WHQA Market

- 5.149 Noting the absence of an effective competitive constraints posed by existing competition, ComReg now assesses the effectiveness of any constraints likely to be posed by potential competition in the Zone B MI WHQA Market.
- 5.150 This assessment considers whether potential entry (and expansion) in the Zone B MI WHQA Market is sufficiently likely, timely, and credible to such an extent that it would effectively constrain Eircom's ability to act independently of its competitors, customers and consumers over the medium term⁵³⁴.
- 5.151 In considering constraints posed by potential competition, ComReg first examines the barriers to entry and expansion insofar as they may impact upon the effectiveness of the constraints posed by potential competitors. Then, ComReg assesses the strength of any such potential competition having regard to the barriers to entry and expansion that have been identified.

Barriers to Entry and Expansion

- 5.152 In assessing the likelihood of potential competition to act as an effective constraint on Eircom over the period of this market review, ComReg has examined the nature and extent of any barriers to firms both entering and/or subsequently expanding in the Zone B MI WHQA Market.
- 5.153 Barriers to entry generally comprise any disadvantage that a new entrant faces when entering a market that incumbents do not currently face. According to the Explanatory Note to the 2014 Recommendation:⁵³⁵
- “...high structural barriers may be found to exist when the market is characterised by absolute cost advantages, substantial economies of scale and/or economies of scope, capacity constraints, and high sunk cost. Such barriers can be found in sectors that rely on the deployment of networks, such as fixed networks for electronic communications.”*
- 5.154 Barriers to growth and expansion are obstacles that a new entrant (or smaller existing competitor) faces in its ability to grow or expand in a particular market, and which limit its ability to assert an effective competitive constraint over the medium to longer term.

⁵³⁴ See paragraph 74 of the European Commission's SMP Guidelines.

⁵³⁵ Explanatory Note to 2014 Recommendation, page 9.

5.155 Assessing the barriers to entry and expansion involves initially identifying what represents credible entry into the Zone B MI WHQA Market. In order to provide an effective competitive constraint, a potential entrant must provide a product that at least meets the characteristics of the MI WHQA products, services and facilities set out in Section 4 (thereby meeting the expectations of Access Seekers).

The demand for MI WHQA products is limited and spread throughout the Zone B MI WHQA Market

5.156 Barriers to entry and expansion were already considered when assessing the strength of Eircom's existing competitors in paragraphs 5.140 to 5.142 above. In particular, it was noted that the demand for retail MI LLs is relatively limited and spread throughout the Zone B MI WHQA Market and, thus, SPs of MI WHQA services would unlikely to be incentivised to expand their existing networks in the Zone B MI WHQA Market on a large scale basis in order to supply this relatively sparse demand.

Building an Independent Network to provide MI WHQA products in the Zone B MI WHQA Market

5.157 ComReg has considered the extent to which potential competition from Greenfield network builds (i.e. completely new build) would be likely to materialise and constrain Eircom's suggested SMP position over the period of this market review.

5.158 As discussed above, there are a number of factors that may act as a barrier to this type of entry occurring in the Zone B MI WHQA Market:

- (a) There are significant sunk costs that would be incurred when entering the Zone B MI WHQA Market;⁵³⁶
- (b) Eircom operates a largely ubiquitous network and has a large customer base and diversified product range. Therefore, Eircom is likely to benefit from significant economies of scale, scope and density⁵³⁷; and
- (c) Eircom benefits from being vertically integrated as it is also a significant provider of retail MI LLs and has the incentive and ability to leverage any SMP in the Zone B MI WHQA Market to the retail MI LL market.⁵³⁸

⁵³⁶ See paragraph 5.140 above.

⁵³⁷ See paragraph 5.142 above.

⁵³⁸ See section 8 for more details on competition problems.

5.159 ComReg notes that the NBP⁵³⁹ contract is expected to be awarded and the roll-out of a fibre access network that is likely to be located areas that part of the Zone B MI WHQA Market is expected to commence within the lifetime of this market review. To the extent that the NBP network can be utilised to provide MI WHQA products, it should strengthen independent infrastructure based competition in the Zone B MI WHQA Market and to the extent that such roll out involves newly deployed networks.⁵⁴⁰ However, ComReg's preliminary view is that given the timing and uncertainty regarding which SP(s) will be awarded the NBP contracts, such entry is not likely to act as a sufficient competitive constraint on Eircom in the Zone B MI WHQA Market within the lifetime of this review.

5.160 Given the presence of barriers to entry discussed in paragraph 5.158 above, ComReg considers that there is unlikely to be a significant new entry in the Zone B MI WHQA Market in the medium term. Thus, ComReg is of preliminary view that the potential for entry into the Zone B MI WHQA Market based on a new network build is unlikely to effectively constraint Eircom within the period of this market review.

Expanding an Existing Network coverage to provide MI WHQA products in the Zone B MI WHQA Market

5.161 ComReg has considered the extent to which potential entry in the Zone B MI WHQA Market by an existing SPs expanding the reach of their networks would be likely to occur over the period of this market review and effectively constrain Eircom's suggested SMP position.

5.162 The barriers to entry present in the Zone B MI WHQA Markets may be lessened, in part, if a potential entrant has an existing network that is used to provide WHQA and/or other services and could be leveraged to also provide MI WHQA services in Zone B. An example would be an SP who uses some of its own network infrastructure in Zone A to provide MI LLs to multi-site customers and may expand that network to a Zone B location to serve that retail customer.

⁵³⁹ As noted in paragraph 3.66 of the 2016 Consultation, the Irish Government has proposed the National Broadband Plan ('NBP'), which will support the provision of broadband access to households and businesses that currently fall outside the reach of existing broadband networks. The purpose of the NBP is to ensure that broadband service with a minimum download speed of 30Mb/s is available nationally. A detailed procurement process is underway with a view to commencing construction of a wholesale network that would support the provision of broadband services as well as other services such as voice, multicast (to support TV), machine-to-machine ('M2M') and LL services. It is envisaged that the wholesale network supporting this service could also be leveraged to provide retail LL services.

⁵⁴⁰ The ability of the NBP network to support MI WHQA services is unclear at this time.

- 5.163 Relative to a ‘Greenfield’ entrant, an existing vertically integrated SP seeking to enter the Zone B MI WHQA Market could face reduced sunk costs, particularly those relating to the upfront civil costs involved in building a network. An existing SP also has an existing customer base over which it may, through cross-selling, more easily recover entry costs, and may be better placed to achieve economies of scale, scope, and density relative to a ‘new build’ Greenfield entrant.
- 5.164 In this regard, ComReg notes the continuing roll-out of the SIRO network⁵⁴¹ and the recently announced joint venture between Enet and SSE Airtricity⁵⁴². To the extent that these networks can be utilised to provide MI WHQA products, they can potentially strengthen independent infrastructure based competition in the Zone B MI WHQA Market. However, the existing roll-out plans announced by SIRO and Enet/SSE Airtricity indicate that their networks would have a limited coverage (compared to that of Eircom’s) in the Zone B MI WHQA Market.
- 5.165 This factor and the sparse demand for MI LLs by end-users in the Zone B MI WHQA Market means that Access Seekers’ demand for hypothetical MI WHQA products offered by SIRO and Enet/SSE Airtricity may be limited.⁵⁴³

⁵⁴¹ See <http://siro.ie/> for details.

⁵⁴² See <http://www.enet.ie/enet-sse.html> for more details.

⁵⁴³ ComReg will update its coverage maps prior to a final decision.

Using upstream inputs such as ducts and poles to offer MI WHQA products in the Zone B MI WHQA Market

5.166 ComReg notes that Access Seekers are already using upstream inputs for extending their networks albeit on a limited scale and primarily in the Zone A MI WHQA Market. For example, [REDACTED] as well as other Access Seekers are purchasing dark fibre inputs from Enet in order to provide LL services to end-users. Eircom, until recently, had a usage restriction on the access to its ducts and poles whereby, access to these inputs for the purpose of selling LLs was prohibited. In January 2017, Eircom removed this restriction, but ComReg is not aware of any Access Seeker currently using Eircom's ducts and poles for their access network extension on a significant scale. ComReg also notes that in its WLA/WCA Consultation⁵⁴⁴ (which followed the 2016 Consultation), ComReg set out a set of proposals in relation to the access remedies in the WLA and WCA markets and in particular, enhanced Civil Engineering Infrastructure ('CEI')⁵⁴⁵ access remedies in the WLA market⁵⁴⁶.

5.167 In relation to access to Eircom's dark fibre, ComReg notes an agreement between [REDACTED]
[REDACTED]
[REDACTED]⁵⁴⁷. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. Other Access Seekers currently do not use Eircom's dark fibre, although in the WLA/WCA Consultation ComReg proposed to enhance obligations governing access to Eircom's dark fibre in locations where access to ducts and poles is not available and where fibre was reasonably available.

⁵⁴⁴ See "[Market Reviews Wholesale Local Access \(WLA\) provided at a fixed location, Wholesale Central Access \(WCA\) provided at a fixed location, Consultation and Draft Decision, ComReg Document 16/96](#)", dated 11 November 2016 ('**WLA/WCA Consultation**').

⁵⁴⁵ "CEI" or "Civil Engineering Infrastructure" also known as passive access infrastructure means the physical access path facilities deployed by Eircom to host cables such as copper wires, optical fibre and co-axial cables. It includes but is not limited to, subterranean and/or above ground assets such as Sub-Ducts, Ducts, Chambers and Poles.

⁵⁴⁶ See paragraphs 8.186 to 8.279 of the WLA/WCA Consultation.

⁵⁴⁷ [REDACTED]
[REDACTED]

5.168 Thus, while there is evidence of some upstream inputs usage by Access Seekers to provide MI WHQA services, ComReg is of preliminary view that, over the period of this market review, the extent to which alternative networks expansion using upstream inputs would effectively constrain Eircom's suggested SMP position in the Zone B MI WHQA Market is likely to be limited. Nevertheless, ComReg recognises the potential for increased take-up of Eircom's regulated WLA products such as ducts and poles over the period of this market review. In this context, ComReg will continue to monitor industry activity with respect to the uptake of upstream inputs for the purpose of providing MI WHQA services and revisit this analysis and/or adjust any remedies as appropriate to reflect any substantial network roll-out in the Zone B MI WHQA Market.

Preliminary conclusion on Potential Competition in the Zone B MI WHQA Market

5.169 In paragraphs 5.149 to 5.168 above, ComReg has considered the extent to which potential competition would, over the period of this market review, be likely to effectively constrain Eircom's behaviour in the Zone B MI WHQA Market such that it would mitigate Eircom's suggested SMP position in this market. Overall, ComReg's preliminary view is that absent regulation in this market, it is unlikely that Eircom would be sufficiently constrained by potential competition such that it would prevent Eircom from behaving, to an appreciable extent, independently of competitors, customers and consumers.

5.170 ComReg considers that alternative network operators would be unlikely to enter/significantly expand their networks in the Zone B MI WHQA Market over the period of this review given that the demand for retail MI LLs is limited and spread throughout this market. As such, ComReg considers that existing alternative independent network operators would be unlikely to exert a sufficient competitive constraint on Eircom in the Zone B MI WHQA Market.

CBP Assessment in the Zone B MI WHQA Market

5.171 Below, ComReg considers whether bargaining power on the buyer side of the Zone B MI WHQA Market is likely to impose a sufficiently effective competitive constraint on Eircom, such that it would credibly offset Eircom's suggested power to behave, to an appreciable extent, independently of competitors, customers and ultimately consumers.

5.172 In so doing, ComReg examines whether sufficient CBP exists such that it results in Eircom not being able to sustain prices in the Zone B MI WHQA Market that are above the competitive level, i.e. the effective exercise of CBP is one which results in such Zone B MI WHQA product prices being constrained to the levels that would be achieved in a competitive market outcome.

5.173 The framework for CBP assessment was set out in the 2016 Consultation⁵⁴⁸. In line with this framework, it is ComReg's view that effective CBP results from buyers/customers that:

- (a) Account for a significant proportion of the supplier's total output;
- (b) Are well-informed about credible alternative sources of supply; and
- (c) Are able to switch to other suppliers at little cost to themselves, or to self-supply the relevant product relatively quickly and without incurring substantial sunk costs.

5.174 The above factors are considered below (note that b) and c) are considered together), along with any evidence of effective CBP being exercised in negotiations between Eircom and Access Seekers.

Size of the Buyer and its Relative Importance to the Seller

5.175 The strength of CBP can be influenced by the relative size of the buyer, with this being measured according to the buyer's share of MI WHQA purchased from the SP (in this case, Eircom) relative to total purchases of MI WHQA from the same SP. The degree to which high shares of MI WHQA purchases are concentrated amongst one or more buyers could also be relevant.

5.176 In the Zone B MI WHQA Market, Eircom's retail business with a [\geq [REDACTED]]⁵⁴⁹ market share of MI LL purchases is the largest purchaser. Other large purchasers of Eircom's MI WHQA products are BT and Vodafone. The remaining shares of WHQA purchases in the Zone B MI WHQA Market are split amongst a number of smaller Access Seekers (in terms of purchases).

5.177 Therefore, while two Access Seekers represent a relatively sizeable proportion of Eircom's MI WHQA sales,⁵⁵⁰ Eircom is a vertically integrated SP that also earns revenue from supplying retail services. Eircom is not, therefore, solely reliant on MI WHQA revenues. Indeed, absent regulation, it is ComReg's preliminary view that MI WHQA Access Seekers' retail customers would likely purchase retail LL services from Eircom. Assuming that Eircom's retail division is profitable, then Eircom would be likely to increase its profitability and revenue by gaining a retail customer at the expense of MI WHQA revenue.

⁵⁴⁸ See paragraphs 6.71 to 6.81 of the 2016 Consultation.

⁵⁴⁹ Greater than 35%.

⁵⁵⁰ [\geq [REDACTED]]

5.178 Having regard to the above, ComReg's preliminary view is that while, Vodafone and BT are the largest external purchasers of MI WHQA products from Eircom, this is not likely to strengthen their bargaining position as any dependency by Eircom on wholesale revenues earned from BT and Vodafone could be largely converted to retail revenues through foreclosing access to BT and Vodafone to the products in the Zone B MI WHQA Market and so gaining the retail demand currently being met by these SPs. It should also be noted that such foreclosure could lead to further increased retail revenues for Eircom in the retail MI LL market as Multi-site retail LL customers tend to purchase LL services from the same SP⁵⁵¹.

Credible Alternative Sources of Supply

5.179 In paragraph 5.132 above, ComReg noted that Eircom is the largest supplier of Zone B MI WHQA. Access Seekers purchasing such products have limited options for switching to another supplier⁵⁵² as highlighted by the limited network reach of alternative wired networks⁵⁵³. In this respect, ComReg notes that despite BT (and, to a limited extent, Vodafone) being able to self-supply MI WHQA products they, nonetheless, buy a significant portion of such lines from Eircom, thereby suggesting their own network reach is insufficient to fulfil their downstream demand. As noted previously, Eircom's competitors in the Zone A MI WHQA Market are unlikely to enter or significantly expand their networks into the Zone B MI WHQA Market given that the demand for MI LLs is limited and spread throughout this market. Thus, ComReg is of further preliminary view that effective potential competition in the Zone B MI WHQA Market is not likely to emerge within the period of this market review.

⁵⁵¹ See Table 3 above.

⁵⁵² Given that BT and Vodafone are the largest consumers of Eircom's MI WHQA products and that these are relatively large organisations having significant experience of operating within electronic communications markets, they are likely to be reasonably well informed about alternative sources of supply, were they to exist.

⁵⁵³ See Table 16 above which highlights that combined reach of alternative networks in terms of Multi-site purchasers of LLs premises is less than 30%.

5.180 Access Seekers therefore, are highly reliant on Eircom's MI WHQA services in the Zone B MI WHQA Market to provide retail LL services to their customers, and, in the absence of regulation, are unlikely to be in a position to credibly threaten to respond to changes in Eircom's commercial terms and conditions by seeking an alternative source of supply. As discussed throughout this section, in response to a MI WHQA products' price increase by Eircom, barriers to entry would likely to inhibit Access Seekers from switching to self-supplied MI WHQA LLs in response given the limited network reach of their own networks in the Zone B MI WHQA Market.

Evidence of bargaining power from operator negotiations

5.181 ComReg has considered whether effective CBP being exercised is evident from bargaining in WHQA negotiations between Eircom on the one hand and Access Seekers on the other. In this respect, in 5.146 ComReg examined Eircom's MI WHQA pricing behaviour and set out its view that there is no firm behavioural evidence to suggest that Eircom is facing effective pricing constraints in the provision of MI WHQA services in the Zone B MI WHQA Market. This also suggests that effective CBP has not been or is likely to be a relevant factor in constraining Eircom's behaviour in this market.

5.182 In the 2016 Consultation⁵⁵⁴ ComReg noted SPs' views that Access Seekers tend to negotiate with suppliers of MI WHQA services on prices and SLAs. However, ComReg considers that Access Seekers' bargaining position is unlikely to be sufficiently strong such that it would result in MI WHQA pricing being prevented from rising above a level that would pertain in a competitive market outcome in the absence of regulation in the Zone B MI WHQA Market.

Preliminary Conclusion on CBP Assessment in the Zone B MI WHQA Market

5.183 Having regard to the analysis in paragraphs 5.171 to 5.182 above, ComReg's preliminary view is that it is unlikely that Eircom would be sufficiently constrained by CBP such that it would prevent it from behaving, to an appreciable extent, independently of competitors, customers and consumers.

⁵⁵⁴ See paragraph 6.93 of the 2016 Consultation.

Overall Preliminary Conclusion on SMP Assessment on the Zone B MI WHQA Market

5.184 Having considered the lack of existing or potential competition, as well as the absence of sufficiently effective CBP in the Zone B MI WHQA Market, ComReg is of the preliminary view that Eircom is likely to have SMP in this market.

5.7 Proposed Designation of Eircom with SMP in the LB TI WHQA and Zone B MI WHQA markets

5.7.1 Designation of Eircom with Significant Market Power in the LB TI WHQA Market

5.185 In paragraphs 5.48 to 5.50 above (and in section 5 of the 2016 Consultation), ComReg considered a wide range of factors to examine whether any Undertaking enjoys a position of SMP in the LB TI WHQA Markets. These factors have included:

- (a) existing competition in the LB TI WHQA Market⁵⁵⁵;
- (b) potential competition in the LB TI WHQA Market⁵⁵⁶; and
- (c) the strength of any CBP⁵⁵⁷.

5.186 ComReg's preliminary position is that the LB TI WHQA Market is not effectively competitive, and that Eircom would not be sufficiently constrained by the above factors such that it would be prevented from behaving, to an appreciable extent, independently or competitors, customers and consumers in this market.

5.187 Where ComReg determines, as a result of a market analysis carried out by it in accordance with Regulation 27 of the Framework Regulations, that a given market identified in accordance with Regulation 26 of the Framework Regulations is not effectively competitive, ComReg is obliged to designate an Undertaking under Regulation 27(4) of the Framework Regulations as having SMP.

5.188 Having regard to the preliminary positions reached in the analysis above, ComReg's preliminary position is that Eircom should be designated as having SMP in the LB TI WHQA Market.

⁵⁵⁵ See Section 5.2.1 above and paragraphs 6.26 to 6.45 of the 2016 Consultation.

⁵⁵⁶ See Section 5.2.1 above and paragraphs 6.46 to 6.68 of the 2016 Consultation.

⁵⁵⁷ See Section 5.2.1 above and paragraphs 6.69 to 6.94 of the 2016 Consultation.

5.7.2 Proposed Designation of Eircom with Significant Market Power in the Zone B MI WHQA Market

5.189 In paragraphs 5.132 to 5.183 above, ComReg has considered a wide range of factors to identify whether any Undertaking enjoys a position of SMP in the Zone B MI WHQA Market. These factors have included:

- (a) Existing competition in the Zone B MI WHQA Market;
- (b) Potential competition in Zone B MI WHQA Market; and
- (c) The strength of any CPB.

5.190 ComReg's preliminary view is that the Zone B MI WHQA Market is not likely to be effectively competitive and that Eircom would not be sufficiently constrained by the above factors such that it would prevent it from behaving, to an appreciable extent, independently of competitors, customers and consumers.

5.191 Where ComReg determines, as a result of a market analysis carried out by it in accordance with Regulation 27 of the Framework Regulations, that a given market identified in accordance with Regulation 26 of the Framework Regulations is not effectively competitive, ComReg is obliged to designate one or more Undertaking under Regulation 27(4) of the Framework Regulations as having significant market power.

5.192 Having regard to the preliminary conclusions above, ComReg is of the preliminary view that Eircom should be designated as having SMP in the Zone B MI WHQA Market.

Question 3.	Do you agree with ComReg's further preliminary conclusions on the assessment of competition within the Relevant WHQA Markets, including the proposed designation of Eircom as having SMP, as appropriate? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your view.
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6 Competition Problems in the Low Bandwidth TI WHQA Market and Impacts on Competition and Consumers

6.1 Preliminary view set out in the 2016 Consultation

- 6.1 In Section 7 of the 2016 Consultation, ComReg discussed competition problems that would be likely to arise, absent regulation, in the LB TI WHQA Market and related markets having regard to Eircom's proposed SMP position and its ability and incentives to engage in anti-competitive behaviours.
- 6.2 Absent regulation in the LB TI WHQA Market, ComReg considered that Eircom would have the potential ability and incentive to influence a range of competition parameters, including prices, output and the variety or quality of goods and services provided. In general, ComReg discussed various types of competition problems that may arise in a market where an operator has SMP, including:
- (a) Exploitation of customers or consumers by virtue of its SMP position through, for example, setting excessive wholesale charges⁵⁵⁸;
 - (b) Leveraging its market power into adjacent vertically or horizontally related markets through price⁵⁵⁹ and non-price means with a view to foreclosing or excluding competitors in downstream retail and/or upstream wholesale markets⁵⁶⁰; and
 - (c) Engagement in exclusionary behaviour that would result in delay or deter investment and market entry into the LB TI WHQA Market (and ultimately downstream retail markets)⁵⁶¹.

⁵⁵⁸ See paragraphs 7.10 to 7.16 of the 2016 Consultation.

⁵⁵⁹ In relation to price based vertical leveraging behaviour, ComReg noted that Eircom [redacted] and given this behaviour and the presence of an effective cost orientation obligation, the risks of margin squeeze may be negated.

⁵⁶⁰ See paragraphs 7.17 to 7.38 of the 2016 Consultation.

⁵⁶¹ See paragraphs 7.39 to 7.41 of the 2016 Consultation.

6.2 Respondents' Views

- 6.3 5 out of 12 Respondents expressed views in relation to ComReg's assessment of competition problems, with 4 Respondents (ALTO, BT, Enet and Vodafone) broadly agreeing with ComReg's preliminary views and one Respondent (Eircom) disagreeing with some of the identified competition problems.
- 6.4 ALTO and Vodafone agreed with competition problems identified by ComReg and expressed their concerns about Eircom's compliance with regulatory obligations noting their views that Eircom continuously seeks to exploit its dominant position, citing price increases of wholesale broadband products. ALTO and Vodafone also reiterated their concerns in relation to the proposed de-regulation of the MI WHQA Market which are considered in Section 5 of this document.
- 6.5 BT agreed with the competition problems identified by ComReg.
- 6.6 Enet agreed with the competition problems identified by ComReg, but pointed out that the same problems are also relevant in other WHQA markets.
- 6.7 Eircom was of the view that horizontal and vertical leveraging, as well as strategic delaying of investments and market entry, are irrelevant competition problems in the context of a declining LB TI WHQA Market and argued that a price cap at current price levels would address any excessive pricing concerns.

6.3 ComReg's Assessment of Respondents' Views

- 6.8 ComReg notes that Respondents other than Eircom generally agreed with ComReg's preliminary assessment of competition problems in the LB TI WHQA Market.
- 6.9 Contrary to Eircom's assertion, in the Consultation ComReg acknowledged the fact that potential delay or deterrence of investment incentives is of lesser relevance in the LB TI WHQA Market where LL products are largely based on legacy technologies and new entry is unlikely⁵⁶².

⁵⁶² See paragraph 7.14 of the 2016 Consultation.

- 6.10 ComReg does not agree that competition problems associated with vertical and/or horizontal leveraging behaviour are of no relevance in the LB TI WHQA Market. In the 2016 Consultation, ComReg has outlined examples of potential competition issues associated with vertical and horizontal behaviour⁵⁶³. ComReg remains of the view that Eircom, as the Undertaking with SMP in the LB TI WHQA Market, would have an ability and incentive to engage in leveraging behaviour in vertically and/or horizontally related markets in order to strengthen its position in this market and/or potentially reinforce its SMP in the LB TI WHQA Market. This is due to being the main supplier⁵⁶⁴ of LB TI WHQA products to its competitors competing in other horizontally related markets (e.g. MI WHQA Market⁵⁶⁵) and vertically related markets (e.g. WLA and retail LL market(s)) .
- 6.11 ComReg also does not agree with Eircom's view that there are no risks arising with respect to pricing related competition problems in the LB TI WHQA Market. In particular, ComReg remains of the view as expressed in the Consultation⁵⁶⁶ that Eircom, as the Undertaking with SMP in the LB TI WHQA Market, would have an ability and incentive to engage in excessive/exploitative pricing of LB TI WHQA products or price based vertical leveraging behaviour such as, for example, margin squeeze⁵⁶⁷, because Eircom's presence in the LB TI WHQA Market is characterised by a high market share, an absence of existing effective competition, high and non-transitory barriers to entry associated with control over infrastructure not easily replicated, limited scope for potential competition and insufficient CBP. Thus, there is insufficient pressure to constrain Eircom from engaging in excessive/exploitative pricing of LB TI WHQA products or price based vertical leveraging behaviour.

⁵⁶³ See paragraphs 7.17 to 7.38 of the Consultation.

⁵⁶⁴ As noted in paragraph 5.49 above, Eircom's market share in the LB TI WHQA market is over 75%.

⁵⁶⁵ For example, Access Seeker may purchase both TI and MI WHQA services from the same supplier. Absent a wholesale supplier having the ability to serve these needs, its position in the TI WHQA Market may be undermined (and vice versa).

⁵⁶⁶ See paragraphs 7.11 to 7.16 of the Consultation.

⁵⁶⁷ However, as noted in the Consultation, Eircom [redacted] and given this and, in the presence of an effective cost orientation obligation, the risks of margin squeeze may be minimised.

6.4 ComReg's Preliminary Position

- 6.12 ComReg considers it likely that competition problems are likely to arise in the LB TI WHQA Market absent regulation. In particular, Eircom would have the ability and incentive to engage in behaviours of the type described in Section 8 of the 2016 Consultation. For example, by exploiting customers, leveraging SMP into downstream and adjacent markets, and by foreclosing competition in the LB TI WHQA Market, and in other related markets. However, ComReg recognises that over time, as the volume of LB TI WHQA services declines, the risks of such behaviour occurring may lessen. ComReg takes account of this in the context of the nature of the remedies that it intends to impose in the LB TI WHQA Market as discussed in Section 7 below.

Question 4: Do you have any further observations on this Section 6 concerning competition problems in the LB TI WHQA Market?

7 Imposition of Remedies in the Low Bandwidth TI WHQA Market

- 7.1 In Section 8 of the 2016 Consultation ComReg set out its proposed approach to implementing remedies in the LB TI WHQA Market having regard to the identified competition problems. In doing so, ComReg:
- (a) reviewed the legal framework for imposing remedies;⁵⁶⁸
 - (b) reviewed existing wholesale LL remedies imposed under the 2008 Decision and subsequently in other relevant decisions;⁵⁶⁹
 - (c) assessed the regulatory approaches to imposing regulatory remedies in the LB TI WHQA Market;⁵⁷⁰ and
 - (d) proposed and justified regulatory remedies in the LB TI WHQA Market relating to access, non-discrimination, transparency, price-control, cost accounting and accounting separation as well as the withdrawal of certain remedies.⁵⁷¹
- 7.2 This section summarises ComReg's proposed approach as set out in the Consultation, summarises and assesses Respondents' views on this, and then sets out ComReg's final position.

7.1 ComReg's overall approach to Imposing Remedies in the LB TI WHQA Market

- 7.3 In the 2016 Consultation, ComReg proposed that a range of remedies should be imposed upon Eircom in the LB TI WHQA Market, namely:
- (a) Access obligations;⁵⁷²
 - (b) Non-discrimination obligations;⁵⁷³

⁵⁶⁸ See paragraphs 8.6 to 8.12 of the 2016 Consultation.

⁵⁶⁹ See paragraphs 8.13 to 8.25 of the 2016 Consultation.

⁵⁷⁰ See paragraphs 8.26 to 8.34 of the 2016 Consultation.

⁵⁷¹ See paragraphs 8.35 to 8.265 of the 2016 Consultation.

⁵⁷² See paragraphs 8.36 to 8.93 of the 2016 Consultation.

⁵⁷³ See paragraphs 8.94 to 8.111 of the 2016 Consultation.

- (c) Transparency obligations;⁵⁷⁴
 - (d) Price Control obligations;⁵⁷⁵ and
 - (e) Accounting separation and cost accounting obligations⁵⁷⁶.
- 7.4 In the 2016 Consultation, ComReg also proposed to withdraw existing regulatory obligations with respect to wholesale Analogue LLs due to the trivial number of these lines (4 wholesale lines in total were in-situ at the end of 2015) and the fact that there had been no new orders for such products since 2002. Similarly, ComReg proposed to withdraw existing regulatory obligations on Eircom in respect to wholesale end-to-end LLs ('**WLLs**') and wholesale Channelised E1 (2Mb/s) Access⁵⁷⁷ services. ComReg's preliminary view was that given the extent of interconnection currently in place, PPC wholesale inputs would likely be sufficient to allow an Access Seeker to replicate Eircom's retail TI LL services, and thereby compete at the retail and/or wholesale level.

7.2 Respondents' Views and ComReg's Consideration of them

- 7.5 5 out of 12 Respondents expressed views in relation to ComReg's proposed set of remedies in the LB TI WHQA Market.
- 7.6 In addition to receiving comments from Respondents on specific remedies proposed in the 2016 Consultation, ComReg also received a number of general comments.
- 7.7 For each of the remedy categories, below ComReg Summarises the preliminary views set out in the 2016 Consultation, Respondents' comments on the remedies and ComReg's consideration of them, in particular:
- (a) General comments on the overall approach on remedies are summarised and considered in paragraphs 7.9 to 7.21 below:
 - (b) Access remedies are summarised and considered in paragraphs 7.23 to 7.54 below;

⁵⁷⁴ See paragraphs 8.112 to 8.149 the 2016 Consultation.

⁵⁷⁵ See paragraphs 8.150 to 8.257 of the 2016 Consultation.

⁵⁷⁶ See paragraphs 8.258 to 8.263 of the 2016 Consultation.

⁵⁷⁷ This is the wholesale product listed in Issue 1.0 of Eircom's "Wholesale Leased Line Product Description" as currently published on its wholesale website as distinct to E1 Channelised Links required for the delivery of sub 2Mb/s PPC EULs.

- (c) Non-discrimination remedies are summarised and considered in paragraphs 7.53 to 7.73 below;
 - (d) Transparency remedies are summarised and considered in paragraphs 7.74 to 7.94 below;
 - (e) Price control and Cost Accounting remedies are summarised and considered in paragraphs 7.95 to 7.130 below; and
 - (f) Accounting separation remedies are summarised and considered in paragraphs 7.123 to 7.140 below.
 - (g) Comments on the wording of the Decision Instrument giving legal affect to the proposed remedies in the LB TI WHQA Market are considered in paragraphs 7.141 to 7.153 below.
- 7.8 ComReg summarises its overall preliminary position on the imposition of remedies in the LB TI WHQA Market in paragraphs 7.154 to 7.161 below.

7.2.1 General Comments on the proposed approach to remedies

Respondents' Views

- 7.9 5 out of 12 Respondents expressed general views in relation to ComReg's overall approach to imposing remedies.
- 7.10 ALTO and BT agreed with the proposed remedies, but referred to the review by ComReg of the Eircom Regulatory Governance Model ('RGM')⁵⁷⁸ as well as issues relating to non-compliance by Eircom with its regulatory obligations. ALTO argued that the proposed remedies have not been modernised to reflect those remedies imposed in other regulated markets. ALTO also noted an unresolved SLA dispute between its members and Eircom⁵⁷⁹.

⁵⁷⁸ See ComReg Document 17/64. See <https://www.comreg.ie/publication/review-eirs-regulatory-governance-model-2/> for more details.

⁵⁷⁹ ComReg understands this dispute was not in relation to any of the markets under assessment here and is no longer active.

- 7.11 Eircom agreed with ComReg's proposed removal of the Margin Squeeze Test ('**MST**') obligation, as well as removing requirements to provide access to analogue and digital LLs. However, it considered that the proposed pricing and accounting separation obligations should have been considered in the context of the declining market, and were onerous for Eircom (the details of these Eircom views are considered under the specific sections below). Eircom considered that end-users of TI LLs should also be incentivised to migrate to MI LLs and broadband services.
- 7.12 Enet agreed with the proposed remedies, but considered that the same regulatory obligations should be imposed in the MI WHQA Market.
- 7.13 Vodafone supported the proposed remedies in the LB TI WHQA Market and also commented⁵⁸⁰ on the proposed sunset period for the withdrawal of existing remedies⁵⁸¹.
- 7.14 ALTO, BT and Vodafone, while agreeing in principle with ComReg's proposal to impose remedies on Eircom, considered that the remedies proposed by ComReg should be modernised to reflect remedies imposed in other regulated markets (the details of these arguments are considered under the specific sections below).

ComReg's Assessment of Respondents' General Comments on the proposed approach to remedies

- 7.15 ComReg notes that in general, all Respondents other than Eircom agreed that remedies should be imposed on Eircom in the LB TI WHQA Market.
- 7.16 ComReg proposed remedies on the basis that:
- (a) Eircom has SMP in LB TI WHQA Market; and
 - (b) Eircom has the ability and incentive to engage in the identified competition problems⁵⁸² absent regulatory intervention.
- 7.17 ComReg has considered Respondents' views on competition assessment in the LB TI WHQA Market and the competition problems that are likely to arise in this market absent regulation in Section 6 of this Further Consultation, and maintains its preliminary views as set out in the 2016 Consultation. On the basis that ComReg has found that Eircom has SMP in this market, ComReg is required to impose at least one regulatory remedy upon an SMP Undertaking, namely Eircom, in the LB TI WHQA Market.

⁵⁸⁰ These comments are summarised in Section 10.2 below.

⁵⁸¹ The sunset period was discussed in Section 9 of the 2016 Consultation.

⁵⁸² Such competition problems were identified in Section 7 of the 2016 Consultation.

- 7.18 The remedies proposed by ComReg in Section 8 of the 2016 Consultation were specifically aimed at addressing the competition problems that were identified in Section 7 of the 2016 Consultation. These competition problems have been discussed further in Section 6 of this Further Consultation.
- 7.19 With that in mind, ComReg is required to put in place appropriate remedies that address these competition problems in the most effective and proportionate manner. This involves an assessment of specific remedial options. This was undertaken in Section 8 of the 2016 Consultation (as well as in the Regulatory Impact Assessment ('**RIA**') in Section 10 of the 2016 Consultation and now in Section 11 of this Further Consultation). This assessment considered the extent to which specific remedy options were likely to be effective, necessary and proportionate.
- 7.20 ComReg disagrees with Eircom's assertion noted in paragraph 7.11 above that the declining demand for LB TI WHQA products was not adequately acknowledged and considered by ComReg. As noted in Section 5⁵⁸³ above, there is still a significant base of installed active TI LL circuits accounting for 27% of all LL circuits at the end of 2016. It is ComReg's objective to ultimately protect end-users who choose to continue using legacy products. Nevertheless, ComReg acknowledged that certain LB TI WHQA products are no longer requested by Access Seekers and proposed to withdraw regulatory obligations with respect to wholesale analogue LLs, wholesale end-to-end digital leased lines and wholesale Channelised E1 (2Mb/s) Access LL services.
- 7.21 With respect to Eircom's views summarised in paragraph 7.11 above that ComReg should be providing incentives for end-users' migration from Retail TI LLs, ComReg is of the view that there is still a significant installed base of services available using LB TI WHQA products and that maintaining an obligation to provide these services is justified and gives regulatory and commercial certainty for both wholesale and retail users in making their electronic communications purchasing decisions, including upgrading to modern interface based technologies.

⁵⁸³ See paragraphs 5.48 to 5.50 above.

7.22 ComReg also notes that switching of end-users to more modern LL technologies appears to be intrinsically linked to the need for such end-users to upgrade relevant equipment/hardware associated with the use of such TI LLs, and therefore any switching decision is also linked to involve broader investment decisions. ComReg acknowledges that over time TI LLs will likely become redundant for many end-users. ComReg will, of course, over the lifetime of this market analysis, consider any proposals from Eircom for the potential retirement of legacy LL services, having regard to the need to minimise Access Seeker and end-user disruption.

7.2.2 Access Remedies

Preliminary view set out in the 2016 Consultation

7.23 In the 2016 Consultation⁵⁸⁴, ComReg proposed to impose obligations upon Eircom requiring it to inter alia (a) provide access to specified wholesale products services and facilities; and (b) to meet reasonable requests for access from wholesale customers for various LB TI WHQA products, services and facilities. The proposed measures are intended to prevent Eircom from denying competing downstream LL providers access to the wholesale inputs necessary to provide retail and/or wholesale LB TI LLs and associated services. ComReg, therefore, proposed a range of access obligations⁵⁸⁵, including Eircom having to:

- (a) meet reasonable requests for access to LB TI WHQA products, services and facilities;
- (b) provide access to specific LB TI WHQA products, namely PPC EULs⁵⁸⁶ in the bandwidth range 64Kb/s up to and including 2Mb/s;
- (c) provide access to specific Interconnection Services, namely PPC Transport Links (including ISH and CSH variants);
- (d) negotiate in good faith with Undertakings requesting access;
- (e) not to withdraw access to facilities already granted without the prior approval of ComReg;

⁵⁸⁴ See paragraphs 8.36 to 8.93 of the 2016 Consultation.

⁵⁸⁵ See paragraphs 8.50 to 8.85 of the 2016 Consultation.

⁵⁸⁶ An End User Link ('EUL') refers to the portion of a PPC which connects an end-user's premises to a 'Transport Link'. It is described in Eircom's PPC Product Description currently published at http://www.openeir.ie/Products/Data/Partial_Private_Circuits/

- (f) grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities;
 - (g) provide access to specified information which supports existing and future wholesale leased lines;
 - (h) provide access to OSS⁵⁸⁷ or similar software systems necessary to ensure fair competition in the provision of services; and
 - (i) provide access in accordance with a range of conditions governing fairness, reasonableness and timeliness.
- 7.24 As noted in paragraph 7.4 above, ComReg proposed that existing regulatory obligations governing the requirement to provide wholesale Analogue LLs, WLLs and wholesale Channelised E1 (2Mb/s) LL access services were no longer warranted or justified on the basis that demand for these products has significantly decreased, and the risks of foreclosure in the event of non-availability of these products, therefore, appeared to be minimised⁵⁸⁸.
- 7.25 In the 2016 Consultation⁵⁸⁹ ComReg also considered a range of statutory criteria that it is required to consider⁵⁹⁰ when imposing access obligations, including inter alia:
- (a) examining the technical and economic viability of using or installing competing facilities;
 - (b) the feasibility of providing access;
 - (c) the initial outlay of investment by the Undertaking; and
 - (d) the need to safeguard competition in the long term.

Respondents' Views

- 7.26 4 out of 12 Respondents (ALTO, BT, Eircom and Vodafone) expressed views on ComReg's approach to the imposition of access remedies. As noted above, all such Respondents, save for Eircom, agreed that access remedies should be imposed on Eircom in the LB TI WHQA Market.

⁵⁸⁷ Operational Support System ('OSS') such as Eircom's Wholesale Universal Gateway system is an order management and fault handling system designed to be the primary Access point between Eircom and Access Seekers. It accepts and validates Access Seeker orders and faults and is a software "brokerage" system into Eircom's internal production and fault management systems.

⁵⁸⁸ See paragraphs 8.86 to 8.91 of the 2016 Consultation.

⁵⁸⁹ See paragraphs 8.10 and 8.45 of the 2016 Consultation.

⁵⁹⁰ Such criteria are set out in Regulation 12(4) of the Access Regulations.

- 7.27 The key themes commented upon by Respondents can be summarised as follows:
- (a) SLA obligations are inadequate and require more definitive timelines (discussed in paragraphs 7.28 to 7.29 below);
 - (b) The requirement to negotiate in good faith should be strengthened (discussed in paragraph 7.30 below); and
 - (c) Other issues (discussed in paragraphs 7.31 to 7.33 below).

SLA obligations are inadequate and require more definitive timelines

- 7.28 ALTO and BT argued that the proposed SLA obligations are likely to fail in the absence of more definitive deadlines for SLA negotiations. Both Respondents, referring to SLA remedies imposed in the 2015 Fixed Access and Call Origination Market ('**FACO**') Decision⁵⁹¹, were of the view that a 6 months deadline might be appropriate.
- 7.29 Vodafone considered that ComReg's proposed SLA obligations required improvement and noted that clear definitive timelines on SLA negotiation timelines are required.

The requirement to negotiate in good faith should be strengthened

- 7.30 ALTO and BT were of the view that ComReg's should strengthen the proposed requirement for Eircom to negotiate in good faith and apply more enforceable terminology in the wording of obligation. ALTO suggested that ComReg's terminology should, instead, refer to truthful negotiation.

Other issues

- 7.31 Eircom agreed that regulatory obligations governing the requirement to provide wholesale Analogue LLs, WLLs and wholesale Channelised E1 (2Mb/s) Access services should be removed.

⁵⁹¹ See "[Market Review Wholesale Fixed Voice Call Origination and Transit Markets, ComReg Document 15/82, Decision D05/15](#)", dated 24 July 2015 ('**2015 FACO Decision**').

- 7.32 BT noted that ComReg's 2013 NGA Decision⁵⁹² mandates access to WEILs that serve as a component to regulated products in other markets and in particular, are used for backhaul services carrying both LL and broadband traffic simultaneously. Thus, BT sought clarification in relation to access to WEILs if access obligations were to be removed in the MI WHQA Market.
- 7.33 ALTO noted the lack of clarity in relation to infrastructure access remedies in the Wholesale Central Access ('WCA') and Wholesale Local Access ('WLA') markets⁵⁹³ which, in its view, results in regulatory uncertainty for ALTO members in the context of proposed removal of access remedies in the MI WHQA Market. ALTO expressed its concern that such uncertainty could potentially jeopardise SPs' investments and create unnecessary barriers to entry.

ComReg's Assessment of Respondents' Views

- 7.34 In this section ComReg assesses Respondent's views under the themes identified in paragraph 7.27 above, namely:
- (a) SLA obligations are inadequate and require more definitive timelines (discussed in paragraphs 7.35 to 7.36 below);
 - (b) The requirement to negotiate in good faith should be strengthened (discussed in paragraph 7.44 below); and
 - (c) Other issues (discussed in paragraphs 7.45 to 7.47 below).

SLA obligations are inadequate and require more definitive timelines

- 7.35 ComReg notes Respondents views on SLA obligations as summarised in paragraphs 7.28 to 7.29 above. ComReg notes that it was also proposed in the 2016 Consultation that Eircom has an obligation to provide access (including meeting reasonable requests for such) in a fair, reasonable and timely manner⁵⁹⁴ – this would also include any requests for improvements to SLAs.

⁵⁹² See "[Next Generation Access \('NGA'\): Remedies for Next Generation Access Markets, ComReg Doc. No. 13/11, Decision D03/13](#)", dated 31 January 2013 (the '2013 NGA Decision').

⁵⁹³ Markets 3a and 3b in the EC's 2014 Recommendation.

⁵⁹⁴ See paragraphs 8.80 to 8.85 of the 2016 Consultation.

- 7.36 ComReg acknowledges that there have been a number of instances in other regulated markets where delays have arisen in SLA negotiations. While ComReg notes that this market which is in decline and there are negligible volumes of new lines being ordered, it is nonetheless considered appropriate to bring some of the SLA obligations more into line with current regulatory practice.
- 7.37 In this respect ComReg has updated the wording of the obligations relating to SLAs in the LB TI WHQA Market, in particular, that:
- (a) the requirement to conclude, maintain or update, as appropriate, legally binding SLAs with Access Seekers⁵⁹⁵, also includes the requirement that such SLAs include committed service levels and that SLAs should encourage an efficient level of performance;
 - (b) service credits are to be provided by Eircom to Access Seekers in the event that committed service levels are not met. These refer to a financial credit which is provided by Eircom to an Access Seeker where Eircom has failed to meet the service levels which Eircom commits to from time-to-time in its SLA.
- 7.38 The requirement to ensure that SLAs include performance metrics, has been removed, given the clarification above that SLAs should include 'committed service levels' and having regard to the clarifications provided in the context of Transparency remedies discussed below.
- 7.39 ComReg is also of the view that SLAs should incentivise Eircom to provide WHQA products, services and facilities at to a standard that meets the need of Access Seekers and allows them to provide services of the required quality in downstream markets. ComReg is of the preliminary view that SLAs should include committed service levels and Service Credits such that they adequately incentivise Eircom to deliver an efficient level of service quality and allow Undertakings to recoup at a minimum the direct costs and any other loss of value that the Undertakings incur as a result of the circumstances that had triggered the payment of Service Credits. This will also ensure that Eircom is held accountable for its committed service levels by establishing a mechanism for Access Seekers to receive Service Credits where committed service levels are not achieved by Eircom.

⁵⁹⁵ As set out in paragraph 8.82(a) and (f) of the 2016 Consultation.

- 7.40 A failure by Eircom to meet SLA committed service levels can result in costs being incurred by Access Seekers resulting from increased churn or payment of compensation to End Users by way of, for example, waiving service charges. ComReg is of the preliminary view that it is reasonable that the Service Credits to be paid by Eircom to Access Seekers in the event that Eircom does not meet the committed service levels in its SLAs should be such that the Access Seekers can recover the costs incurred, arising from such a failure by Eircom.
- 7.41 SLAs should also specify the circumstances that trigger the payment of Service Credits, such as, but not limited to, a failure by Eircom to achieve committed service levels, or the occurrence of certain specified events (such as, but not limited to, incidents of service outage or deterioration), and/or other such criteria as appropriate.
- 7.42 SLAs also establish committed service levels against which the standards of performance achieved by Eircom can be readily measured and compared, with ComReg also proposing, in the context of transparency obligations discussed below, to impose requirement on Eircom to publish its actual achieved aggregate levels of performance relative to the committed service levels in its SLAs.
- 7.43 Given the slow decline of the LB TI WHQA Market ComReg does not consider it appropriate to impose more onerous obligations than those set out above.

The requirement to negotiate in good faith should be strengthened

- 7.44 ComReg notes ALTO's and BT's views summarised in paragraph 7.30 above in relation to strengthening the proposed requirement for Eircom to negotiate in good faith. ComReg does not agree with ALTO suggestion that ComReg's terminology should refer to 'truthful negotiation' instead of 'negotiate in good faith'. ComReg notes that the wording proposed in the 2016 Consultation is more consistent with wording set out in regulation 12(2)(b) of the Access Regulations.

Other issues

- 7.45 ComReg notes Eircom's agreement, summarised in paragraph 7.31 above, regarding the proposed removal of certain access obligations.
- 7.46 ComReg notes BT request for clarification in relation to the treatment of WEILs used to support the provision of services in other regulated markets (e.g. the WLA and WCA markets).
- 7.47 In this regard, ComReg refers BT to paragraph 9.7 of the 2016 Consultation, where ComReg addressed this issue by stating that:

“It is important to note that Eircom will be required to maintain its WEIL (Wholesale Ethernet Interconnection Links) product at cost orientated prices by virtue that this service is an essential component of regulated products in other markets: The WEIL service was mandated by ComReg in its 2013 “NGA Decision, D03/13[1]”.

- 7.48 Furthermore, ComReg has set out its views in relation to the provision of WEILS in the WLA and WCA markets in its WLA/WCA Consultation.⁵⁹⁶ It specifically states therein that ComReg’s preliminary view is that interconnection services including WEILs should be available at cost orientated prices.⁵⁹⁷
- 7.49 In relation to ALTO’s comments regarding the lack of clarity surrounding infrastructure access remedies summarised in paragraph 7.33 above, ComReg notes that in the WLA/WCA Consultation (which was published after the 2016 Consultation) it set out proposals in relation to access remedies in WLA and WCA markets⁵⁹⁸.

ComReg’s Preliminary Position on LB TI WHQA Access Remedies

- 7.50 Having considered Respondents’ views in paragraphs 7.35 to 7.48 above ComReg intends to maintain its preliminary views on LB TI WHQA Access remedies as set out in the 2016 Consultation⁵⁹⁹.
- 7.51 ComReg set out its preliminary view in the 2016 Consultation that access obligations alone would be insufficient to resolve the identified competition problems and maintains this view. For example, the imposition of access obligations alone would not resolve issues such as excessive pricing, discrimination on price or quality grounds, or ensure transparency of terms and conditions of access.
- 7.52 The access obligations are set out in Section 7 of the Draft Decision Instrument.⁶⁰⁰

⁵⁹⁶ See [“Market Reviews Wholesale Local Access \(WLA\) provided at a fixed location, Wholesale Central Access \(WCA\) provided at a fixed location, Consultation and Draft Decision, ComReg Document 16/96 ”](#), dated 11 November 2016 (**‘WLA/WCA Consultation’**).

⁵⁹⁷ See paragraph 8.831 of the WLA/WCA Consultation.

⁵⁹⁸ See paragraphs 8.31 to 8.392 and paragraphs 13.38 to 13.181 of WLA/WCA Consultation.

⁵⁹⁹ The access remedies proposed in the Consultation were summarised in paragraphs 7.23 to 7.25 above.

⁶⁰⁰ See Appendix: 4

7.2.3 Non-Discrimination Remedies

Preliminary View set out in the 2016 Consultation

7.53 In the 2016 Consultation ComReg, proposed to impose a range of non-discrimination obligations upon Eircom⁶⁰¹ having regard to a range of identified competition problems, including:

- (a) non-discrimination obligations to ensure equivalent treatment of Access Seekers by Eircom in its provision of Access (including Access to LB TI WHQA products, services and facilities) and information in relation to such Access to them;
- (b) non-discrimination obligations to ensure that Eircom provides Access (including Access to LB TI WHQA products, services and facilities) and information to all other Access Seekers under the same conditions and of the same quality as Eircom supplies to itself or to its subsidiaries, affiliates or partners;
- (c) non-discrimination to be applied on, at least, an Equivalence of Outputs ('EoO')⁶⁰² standards basis.

7.54 The above remedies were intended to ensure that Eircom does not favour its downstream arm, or unduly favour any particular wholesale customer, to the detriment of competition and ultimately consumers. The intent was also to ensure that Eircom has implemented a governance structure that results in issues giving rise to the risk of discrimination being remedied.

Respondents' Views

7.55 4 out of 12 Respondents (ALTO, BT, Eircom and Vodafone) commented on ComReg's approach on the imposition of non-discrimination remedies. These Respondents agreed in principle with the imposition of non-discrimination remedies, but disagreed with ComReg about what form the obligations should take and made comments in this regard.

⁶⁰¹ See paragraphs 8.94 to 8.111 of the 2016 Consultation.

⁶⁰² Equivalence of Outputs ('EoO') essentially refers to provision of products, services, facilities, and information by an SMP Undertaking to Access Seekers such that such products, services, facilities, and information is provided to Access Seekers in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP Undertaking provides to itself, albeit potentially using different systems and processes.

- 7.56 ALTO, BT and Vodafone believed that ComReg's proposed measures do not go far enough to address the competition problems that ComReg has identified.
- 7.57 ComReg has summarised the Respondents' main views below, grouping the key issues raised into the identified themes, namely:
- (a) The proposed Non-Discrimination remedies are outdated (discussed in paragraph 7.58 below); and
 - (b) An Equivalence of Inputs ('**Eol**')⁶⁰³ standard should be adopted (discussed in paragraphs 7.59 to 7.62 below).

The proposed Non-Discrimination remedies are outdated

- 7.58 ALTO and BT referred to the review of RGM and considered the proposed Non-Discrimination remedies to be outdated. Both Respondents suggested that Non-Discrimination remedies imposed in the 2013 NGA Decision should be considered as a baseline for remedies in the LB TI WHQA Market.

An Equivalence of Inputs standard should be adopted

- 7.59 ALTO and BT expressed their view that, absent functional separation, the next-best approach to stimulate/enhance competition would be to implement an Eol standard.
- 7.60 BT argued that an EoO standard is outdated, referring to Eircom's non-compliance with Non-Discrimination obligations. In BT's view Eol standard should be applied for all aspects of the service and urged ComReg to actively monitor Eircom's compliance with regulatory obligations.
- 7.61 Vodafone was of the view that Eol standard should be an obligation for all regulated services.
- 7.62 Eircom noted that imposition of Eol standard would be disproportionate in the declining LB TI WHQA Market.

ComReg's Assessment of Respondents' Views

- 7.63 ComReg assesses Respondent's views on the themes identified in paragraph 7.57 above as follows:

⁶⁰³ Equivalence of Inputs ('**Eol**') essentially refers to provision of products, services, facilities, and information by an SMP Undertaking to Access Seekers such that such products, services, facilities, and information is provided to Access Seekers in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP Undertaking provides to itself, and using the same systems and processes.

- (a) The proposed Non-Discrimination remedies are outdated (discussed in paragraphs 7.64 to 7.65 below); and
- (b) An Equivalence of Inputs standard should be adopted (discussed in paragraphs 7.66 to 7.71 below).

The proposed Non-Discrimination remedies are outdated

7.64 ComReg does not agree that the non-discrimination remedies imposed in the 2013 NGA Decision should be considered as a baseline for remedies in the LB TI WHQA Market for the following reasons:

- (a) The LB TI WHQA Market is in steady decline⁶⁰⁴ as, end-users migrate to MI WHQA products, albeit slowly;
- (b) There is little new demand for LB TI WHQA products⁶⁰⁵;
- (c) The LB TI WHQA products, services and facilities are provided largely via legacy Eircom order management systems and processes. The LB TI WHQA Market is well established and has operated reasonably without any significant regulatory issues having been brought to ComReg's attention; and
- (d) The WLA Market is classified as 'mass market' whereas the LB TI WHQA Market is a 'niche' market in a steady decline – therefore, it is, in ComReg's view, inappropriate to draw inferences between these markets with respect to remedies due to differences in impact arising from potential competition problems that may occur absent regulation in these markets.

7.65 Having considered Respondents' views above, ComReg maintains its preliminary view set out in the 2016 Consultation that the proposed non-discrimination remedies in the LB TI WHQA Market are appropriate and proportionate, and should ensure that Eircom does not favour its downstream arm, or unduly favour any particular wholesale customer, to the detriment of competition and ultimately consumers.

An Equivalence of Inputs standard should be adopted

7.66 ComReg notes Eircom's agreement with ComReg's proposal to maintain the EoO standard in the context of LB TI WHQA products, services and facilities.

⁶⁰⁴ See paragraph 3.51 above where it is noted that the overall number of TI retail LLs decreased by 1,083 lines in the 12 months to December 2016.

⁶⁰⁵ See paragraph A 6.4 of Appendix 6 below where ComReg notes that Eircom's supply of LB TI LL in 2016 accounted for 3% (less than 10%) of all LL deliveries

- 7.67 ComReg does not agree with ALTO's, BT's and Vodafone's views summarised in paragraphs 7.59 above that EoI must be mandated for all regulated services.
- 7.68 ComReg considered that the EoO non-discrimination standard is appropriate and proportionate in the context of the LB TI WHQA market, particularly given that the existing provision of LB TI WHQA products, services and facilities is in decline and are provided using legacy Eircom systems and processes. The cost and effort in modifying these systems is not justified and could introduce significant additional costs which would need to be recovered in price increases spread over a reducing number of circuits.
- 7.69 In addition, as noted above, there is little new demand for LB TI WHQA products as End-Users either cease their services or migrate, in due course, to MI WHQA products, resulting in the steady decline of the LB TI WHQA installed base.
- 7.70 ComReg considers that the competition problems identified in the WHQA TI Markets can therefore be addressed on the basis of the proposed EoO.
- 7.71 Having considered Respondents' views above, ComReg's preliminary position is that the EoI obligation for LB TI WHQA products is neither proportionate nor justified. ComReg's therefore intends to maintain its preliminary view set out in the 2016 Consultation that non-discrimination obligations in the LB TI WHQA Market will be applied on an EoO basis.

ComReg's Preliminary Position on Non-Discrimination Remedies

- 7.72 Having considered Respondents' views as set out in paragraph 7.55 to 7.62 above, and having regard to the analysis set out in the 2016 Consultation⁶⁰⁶, ComReg maintains its position set out in the 2016 Consultation with respect to non-discrimination remedies.
- 7.73 The non-discrimination obligations are set out in Section 9 of the Draft Decision Instrument attached at Appendix: 4 of this Further Consultation.

⁶⁰⁶ See paragraphs 8.94 to 8.111 of the 2016 Consultation.

7.2.4 Transparency Remedies

Preliminary View set out in the 2016 Consultation

7.74 To address potential competition problems associated with asymmetry of information and to support access, non-discrimination, price control and other obligations, in the 2016 Consultation ComReg proposed⁶⁰⁷ to impose a range of transparency obligations upon Eircom in the LB TI WHQA Market including requirements to:

- (a) maintain and publish a Leased Line Reference Offer (**'LLRO'**)
- (b) maintain and publish a Network Price list for the products in scope;
- (c) publish changes to the LLRO and wholesale prices, in advance of their coming into effect, and to notify ComReg in advance of publication;
- (d) publish Key Performance Indicators (**'KPIs'**)⁶⁰⁸;
- (e) publish a Service Level Agreement (**'SLA'**);
- (f) put in place a non-disclosure agreement governing the legitimate sharing of confidential and/or commercial information; and
- (g) ensure transparency in its bills by making its wholesale invoices sufficiently disaggregated, detailed and clearly presented such that an Access Seeker can reconcile the invoice to Eircom's LLRO and Network Price Lists.

Respondents' Views

7.75 3 out of 12 Respondents expressed views on ComReg's approach to the imposition of transparency remedies. ALTO, BT, and Eircom, while generally supportive of ComReg's approach, expressed a number of reservations.

7.76 ComReg has summarised the Respondents' main views below, grouping the key issues raised into the identified themes, namely:

- (a) Absence of either Internal Reference Offers (**'IRO(s)'**) or Statements of Compliance (**'SoC(s)'**) (discussed in paragraph 7.77 below);

⁶⁰⁷ See paragraphs 8.112 to 8.149 of the 2016 Consultation.

⁶⁰⁸ In paragraphs 8.139 to 8.144 of the 2016 Consultation ComReg has proposed to amend the current requirement on Eircom to publish KPIs on its public website with respect to service assurance for LB TI WHQA products, service and facilities in accordance with the existing requirements as set out in the ["Introduction of Key Performance Indicators for Regulated Markets, ComReg Document 11/45, Decision D05/11"](#), dated 29 June 2011 (the '**2011 KPI Decision**').

- (b) The proposed advance notification timeframes for LLRO and price changes are insufficient (discussed in paragraphs 7.78 to 7.79 below); and
- (c) Statistical significance of KPIs (discussed in paragraph 7.80 below).

Absence of either Internal Reference Offers or Statements of Compliance

7.77 ALTO and BT considered that transparency remedies should be enhanced by obliging Eircom to publish IROs or SoC. Both Respondents referred to the 2013 NGA Decision as a basis for a SoC obligation.

The proposed advance notification timeframes for LLRO and price changes are insufficient

7.78 ALTO considered that proposed transparency remedies enable ComReg to revise advance notification timeframes for LLRO and price changes at its own discretion and was of the view that such remedies should not be subject to bi-lateral agreement between ComReg and Eircom.

7.79 BT was of the view that advance notification timeframes for LLRO and price changes should be similar to timeframes imposed in the 2013 NGA Decision.

Statistical significance of KPIs

7.80 Eircom noted that the statistical significance of KPIs will deteriorate as the volume of LB TI LLs continue to decline and urged ComReg to consider this issue.

ComReg's Assessment of Respondents' Views

7.81 ComReg assesses Respondents' views according to the themes identified in paragraph 7.76 above, namely:

- (a) Absence of either Internal Reference Offers or Statements of Compliance (discussed in paragraph 7.82 below)
- (b) The proposed advance notification timeframes for LLRO and price changes are insufficient (discussed in paragraphs 7.83 to 7.89 below); and
- (c) Statistical significance of KPIs (discussed in paragraphs 7.90 to 7.91 below).

Absence of either Internal Reference Offers or Statements of Compliance

7.82 ComReg notes that there are trivial numbers of new orders for LB TI WHQA products⁶⁰⁹, and the purpose of maintaining access obligations is to ultimately allow for retail users of these services to manage their connectivity requirements and give certainty to them in relation to their ICT investment and upgrade decisions. As such, imposing a new obligation to require an IRO or SoC would, in ComReg's view, be a disproportionate regulatory burden.⁶¹⁰

The proposed advance notification timeframes for LLRO and price changes are insufficient

7.83 ComReg notes ALTO's comments that ComReg can revise advance notification timeframes for LLRO and price changes at its own discretion.

7.84 In the 2016 Consultation⁶¹¹ ComReg proposed to impose obligations upon Eircom to provide advance notification of proposed amendments or changes to the LLRO and related prices according to specified timeframes. This is to provide sufficient notification to Access Seekers to allow them to factor in such proposed changes into their commercial decision making activities and to make any necessary adjustments or developments to billing or other systems, as appropriate. The specific advance notification requirements also provide a transparent and available mechanism according to which ComReg can monitor compliance by Eircom with its access, non-discrimination, pricing and other obligations proposed in this Consultation.

7.85 ComReg proposed that Eircom should be subject to the following obligations with respect to changes to the LLRO and the Network Price List:

- (a) Eircom shall (unless otherwise agreed by ComReg) publish, on its publicly available website - at least three months in advance - any proposed changes to the LLRO and any proposed changes to Wholesale prices and the application of such prices for the purposes of notifying all interested parties of such changes.
- (b) Eircom shall notify ComReg at least five working days in advance of any such publication taking place. This period of five working days may be varied from time to time with the agreement of ComReg.

⁶⁰⁹ Less than 25 per annum.

⁶¹⁰ This is in contrast to ComReg's preliminary views in relation to regulatory obligations pertaining to the relevant Zone B MI WHQA market ⁶¹¹ See paragraphs 8.133 to 8.135 of the 2016 Consultation.

⁶¹¹ See paragraphs 8.133 to 8.135 of the 2016 Consultation.

- 7.86 ComReg assumes that ALTO is referring to the emphasised text above.
- 7.87 ComReg has exercised its powers in the past to grant a derogation to Eircom and reduce the publication timeframe of 3 months, when it is clearly in the interests of Access Seekers, competition and end-users. For example, where price reductions are involved these could be fed through earlier than would otherwise be the case, while at the same time providing a shorter and reasonable period of notification. The proposed obligation noted in paragraph 7.85 above is considered appropriate and proportionate given that it provides a reasonable degree of flexibility. ComReg will, of course, exercise its discretion having regard to the particulars of each circumstance and in a manner that is fair, reasonable and proportionate.
- 7.88 ComReg notes BT's view that advance notification timeframes for LLRO and price changes should be similar to timeframes imposed in the 2013 NGA Decision.
- 7.89 ComReg preliminary position is that advance notification timeframes for LLRO and price changes should remain as they are. This gives certainty to Access Seekers and retail users. However, given that product innovation and new demand are likely to be quite low, it is not considered proportionate for timelines to mirror those applying with respect to NGA in other markets.

Statistical significance of KPIs

- 7.90 ComReg notes Eircom's comment summarised in paragraph 7.80 above that the statistical significance of KPIs will deteriorate as the volume of LB TI LLs continue to decline and urged ComReg to consider this issue.
- 7.91 ComReg's preliminary position is that, while the number of new LB TI LLs orders is likely to remain extremely low, the installed base of LB TI LLs is still sufficiently large. Hence, in the context of service assurance, KPIs are still statistically significant. ComReg will continue to monitor the situation and KPIs will be interpreted having regard to their statistical significance as the market evolves.

7.92 As noted above in the context of Access obligations⁶¹², given the amended requirement to include committed service levels within SLAs, ComReg has proposed to remove the requirement concerning Performance Metrics. ComReg is proposing to require Eircom to publish, on a quarterly basis, on its publicly available wholesale website, a report that evidences actual performance achieved in respect of all Access Seekers on an aggregate basis compared to the committed service levels contained in the relevant SLA for the products, services and facilities required to be provided pursuant to its access obligations. Eircom is also to be required to include in the report the methodology and a description of the source data used to determine the actual performance achieved. The report shall also describe how the source data was processed by Eircom and include worked examples as to how the processed source data relates to the actual performance achieved. The justification for such requirements is that it is considered by ComReg to be an effective way of providing transparency regarding the service levels provided by Eircom, having regard to its access, non-discrimination and other obligations.

ComReg's Preliminary Position on Transparency Remedies

7.93 Having considered Respondents' views in paragraphs 7.81 to 7.91 above and having regard to the analysis set out in the 2016 Consultation⁶¹³, ComReg's preliminary position is to maintain its preliminary views as set out in the 2016 Consultation.

7.94 The transparency obligations are set out in Section 10 of the Draft Decision Instrument attached at Appendix: 4 of this Further Consultation.

⁶¹² See paragraph 7.38 above.

⁶¹³ See paragraphs 8.112 to 8.149 of the 2016 Consultation.

7.2.5 Price Control and Cost Accounting Remedies

Preliminary view set out in the 2016 Consultation

7.95 In the 2016 Consultation, in order to address potential competition problems associated with pricing, including excessive pricing and margin squeeze, ComReg's preliminary view was that a price control⁶¹⁴ obligation of cost orientation should apply to the PPC products, services and facilities in the LB TI WHQA Market, based on the derivation of cost oriented tariffs for PPCs. In doing so ComReg:

- (a) Reviewed current pricing methodology which applied to PPCs and related interconnection facilities known as Transport Links⁶¹⁵.
- (b) Set out a range of available price control options and noted that a cost orientation obligation is justified to set maximum price levels for LB TI WHQA products, services and facilities⁶¹⁶.
- (c) Determined the appropriate costing methodology⁶¹⁷. In particular, ComReg held the preliminary view that:
 - (i) Cost standard used to determine the efficient price level of PPCs (and any interconnection costs) should continue to be Long Run Average Incremental Cost ('**LRAIC**')⁶¹⁸ plus cost standard⁶¹⁹.
 - (ii) The modified current cost approach is the most relevant cost base to determine charges for LB TI WHQA products, services and facilities⁶²⁰. This model is referred to hereafter within this publication as the TI PPC EUL Modified Technology Cost Model; and

⁶¹⁴ See paragraphs 8.150 to 8.257 of the 2016 Consultation.

⁶¹⁵ See paragraphs 8.162 to 8.164 of the 2016 Consultation.

⁶¹⁶ See paragraphs 8.165 to 8.194 of the 2016 Consultation.

⁶¹⁷ See paragraphs 8.195 to 8.227 of the 2016 Consultation.

⁶¹⁸ In general, LRAIC is the average of all the (variable and fixed) costs that a company incurs to produce a particular product.

⁶¹⁹ See paragraphs 8.200 to 8.209 of the 2016 Consultation.

⁶²⁰ See paragraphs 8.210 to 8.218 of the 2016 Consultation.

- (iii) A scorched node Bottom Up ('BU')⁶²¹ approach should be used in developing the cost model⁶²².
 - (d) Outlined the approach that would be used to revise the existing BU-LRAIC plus Cost Models also referenced in the 2016 Consultation⁶²³. The principle model for deriving the costs associated with the TI EUL PPC products is referred to hereafter as the **"The TI PPC EUL Modified Technology Cost Model"**.
 - (e) Note that price control period should be set for at least three years in line with the market analysis process⁶²⁴.
- 7.96 In relation to cost accounting obligations, ComReg proposed to maintain existing obligations as set out under the 2010 Accounting Separation Decision⁶²⁵.

Respondents' Views

- 7.97 2 out of 12 Respondents (ALTO and Eircom) expressed views on ComReg's approach to the imposition of price control and cost accounting remedies. ALTO agreed with ComReg's views, but commented on a specific aspect of the proposed obligations. Eircom disagreed with ComReg's approach, and made a number of comments which are considered below.
- 7.98 ComReg has summarised the Respondents' main views in detail below, grouping the key issues raised into the identified themes, namely:
- (a) ComReg's approach failed to consider the declining demand for LB TI WHQA products (discussed in paragraphs 7.99 to 7.100 below);
 - (b) Cost Orientation is not an appropriate form of price control (discussed in paragraphs 7.101 to 7.103 below);
 - (c) Current Cost Accounting is not an appropriate cost approach (discussed in paragraph 7.104 below);

⁶²¹ BU approach in general refers to a scenario whereby the costs are those incurred by an efficient operator when building an up to date and modern network.

⁶²² See paragraphs 8.219 to 8.227 of the 2016 Consultation

⁶²³ See paragraphs 8.228 to 8.255 of the 2016 Consultation.

⁶²⁴ See paragraphs 8.256 to 8.257 of the Consultation.

⁶²⁵ ["Accounting Separation and the Cost Accounting Review of Eircom Limited, ComReg Document 10/67, Decision D08/10"](#), dated 31 August 2010 (the **2010 Accounting Separation Decision**).

- (d) A Top Down⁶²⁶ ('TD') model is not an appropriate cost model (discussed in paragraph 7.105 below); and
- (e) The Weighted Average Cost of Capital ('WACC') should reflect the actual rate of return, instead of a reasonable rate of return (discussed in paragraph 7.106 below).

ComReg's approach failed to consider the declining demand for LB TI WHQA products

7.99 Eircom considered that ComReg's proposed price control and cost accounting obligations inappropriately seek to encourage market entry in a legacy market and may dampen migration to modern fibre based services. In Eircom's view, in a market facing declining demand (such as the LB TI WHQA Market), traditional objectives of price control and cost accounting remedies should be supplemented with additional goals and objectives such as:

- (a) Considering distributional effects;
- (b) Encouraging investment in NGA networks; and
- (c) Creating appropriate incentives for efficient migration.

7.100 Eircom argued that ComReg's approach will lead to artificial demand in a market where supported products are at the end of their lifecycle and referred to its intentions to retire a range of copper delivered services including LB TI WHQA services.

Cost Orientation is not an appropriate form of price control

7.101 Eircom reiterated its view that competition problems related to access are irrelevant in the context of a declining LB TI WHQA Market, noting the declining demand and End-Users' migration from LB TI LLs. In Eircom's view, in such a market cost orientated prices would reduce End-Users' incentives for migration to new technologies and increase the risk of non-recovery of efficiently incurred sunk costs.

7.102 Eircom proposed that a price cap set at current wholesale prices should apply and noted that the application of a price cap from a practical perspective is easier than a price control remedy based on cost orientation.

⁶²⁶ Top Down approach refers to the situation whereby the source of financial information being used is taken from the audited Eircom accounting records.

7.103 Eircom also disagreed that BU-LRAIC+ cost model is representative of efficient costs incurred by Eircom and noted that ComReg failed to consider the issue of sunk costs recovery in the context of declining demand for LB TI WHQA products. Thus, Eircom considered that a new cost model would have to be developed and queried whether such approach is merited in a legacy market.

Current Cost Accounting is not an appropriate cost approach

7.104 Eircom argued that ComReg's primary concern should be to ensure the recovery of efficiently incurred sunk costs and to preserve the incentives for capital maintenance rather than incentivise market entry. Eircom was of the view that ComReg's approach would result in capital levels that are arbitrary and have no economic justification given that prospective entry in the LB TI WHQA Market was unlikely.

A Top Down model is not an appropriate cost model

7.105 Eircom considered that the development of a top-down model is inappropriate given that such model's inputs are unreliable.

The WACC should reflect the actual rate of return, instead of a reasonable rate of return

7.106 ALTO expressed its view that the proposed WACC should reflect the actual (rather than reasonable) rate of return and noted that Eircom's actual returns have recently been far higher than reasonable returns.

ComReg's Assessment of Respondents' Views

7.107 ComReg assesses Respondent's views on the themes identified in paragraph 7.98 above as follows:

- (a) ComReg's approach failed to consider the declining demand for LB TI WHQA products (discussed in paragraphs 7.108 to 7.111 below);
- (b) Cost Orientation is not an appropriate form of price control (discussed in paragraphs 7.112 to 7.113 below);
- (c) Current Cost Accounting is not an appropriate cost accounting approach (discussed in paragraphs 7.114 to 7.116 below);
- (d) Top Down model is not an appropriate cost model (discussed in paragraphs 7.117 below); and
- (e) The WACC should reflect the actual rate of return, instead of a reasonable rate of return (discussed in paragraphs 7.118 to 7.120 below).

ComReg's approach failed to consider the declining demand for LB TI WHQA products

- 7.108 In using a BU-LRAIC+ cost model to establish cost orientation for TI LB PPCs, ComReg developed a cost model, known as the TI PPC EUL Modified Technology Cost Model, based on a hybrid structure which, while reflecting the cost base for an SDH network, included the demands from a range of services including those from voice and broadband in conjunction with those from LL products
- 7.109 It should be noted that demand capacities for MI WHQA were converted into TI equivalents and as such, demand for both TI LL products and for MI LL products are included. In this respect, the cost model employed for the cost orientation exercise reflected the summary mix of service demands. This includes the declining demands from TI WHQA products, in conjunction with the increasing demands from MI WHQA products, as migration occurs between the product markets.
- 7.110 In this context, Eircom had concerns that artificial demands for TI LL products would be sustained for a longer period, possibly through price reductions, and so disrupt the investment cycle. The combined demands of both generations of products permits the realisation of the economies of scale in providing both services. Moreover, it also allows the application of a cost base associated with SDH technology which avoids the risk of disrupting the investment cycle.
- 7.111 In any event, a preliminary review of the bottom up cost modelling outputs exercise for TI WHQA PPC products indicates that cost oriented tariffs closely align with existing market rates. This should ameliorate any further concerns.

Cost Orientation is not an appropriate form of price control

- 7.112 ComReg notes Eircom's' comments relating to declining demands for LB TI products and the concerns that cost oriented prices - which if they were to decline below existing market rates - may hinder customer migration to next generation or MI leased line products. Also, Eircom expressed concerns in relation to the risk to sunk investment costs, and Eircom proposed the establishment of a price cap, at existing price levels, to avoid such risks.

7.113 However, ComReg is of the view that the use of a BU-LRAIC+ cost model based on the costs of an SDH network that includes the demand from all services carried in Eircom's transmission network converted into TI equivalents, results in a balance which addresses the risk of sunk cost investments in MI WHQA services being included in the model. ComReg is of the view that this avoids disrupting the investment cycle. In addition, as noted earlier, the cost outputs from the TI PPC EUL Modified Technology Cost Model for TI PPC products indicate that existing market tariffs for PPC components such as the Main Link Access ('MLA'), Main Link Distance ('MLD') and local access components should largely remain unchanged for the proposed control period.

Current Cost Accounting is not an appropriate cost approach

7.114 Eircom raised concerns in relation using a Current Cost Accounting ('CCA') approach. These related to the recovery of sunk costs and the need for capital maintenance. Furthermore, Eircom, also noted the risk that capital levels contained in the model would be arbitrary.

7.115 However, ComReg is of the view that in applying the hybrid approach to the construction of BU-LRAIC+ cost model (outlined above), it has ensured that capital investments are protected.

7.116 It should also be noted that if an alternative approach, such as a full Modern Equivalent Asset approach based on Ethernet technologies to the cost modelling exercise had been adopted, then cost oriented PPC tariff could have resulted in the risks outlined by Eircom.

A Top Down model is not an appropriate cost model

7.117 ComReg re-iterates its position, as outlined in the 2016 Consultation⁶²⁷, that a BU-LRAIC+ cost oriented approach to the derivation of cost oriented tariffs for TI products is the correct methodology and agrees with the comments that a TD model approach, is not an appropriate option in the context of TI LL cost orientation.

⁶²⁷ See paragraph 8.248 of the 2016 Consultation.

The WACC should reflect the actual rate of return, instead of a reasonable rate of return

- 7.118 ComReg note the concerns expressed by ALTO that WACC should be based on the actual rate of return, as the actual returns being realised by Eircom in its accounting results have been recently higher than reasonable rates.
- 7.119 The WACC rate applied in the BU-LRAIC+ cost modelling is based on the regulated rate of 8.18%, the assessed reasonable rate for regulated fixed telephony service providers as determined in ComReg's 2014 WACC Decision⁶²⁸. This Decision established a reasonable rate of return which is applied in BU-LRAIC+ cost and ensures that investment is reasonably rewarded.
- 7.120 The fact that Eircom are realising higher rates of return in its accounting results reflects a cost base which is top down in nature. The use of the WACC rate in the cost modelling exercise ensures that the risk to investments is protected but also avoids disrupting the investment cycle by compelling materially lower tariffs for T1 LL products which may negatively impact on investment in newer, more efficient products.

ComReg's Preliminary Position on Price Control and Cost Accounting Remedies

- 7.121 Having considered Respondents' views in paragraphs 7.107 to 7.120 above, ComReg's further preliminary position is that it intends to maintain its preliminary views as set out in the 2016 Consultation and to impose the associated price control and cost accounting obligations upon Eircom.
- 7.122 The price control and cost accounting obligations are set out in Section 12 of the Draft Decision Instrument attached at Appendix: 4 of this Further Consultation.

7.2.6 Accounting Separation Remedies

Position set out in the 2016 Consultation

- 7.123 In the 2016 Consultation⁶²⁹, ComReg proposed to maintain existing accounting separation obligations as set out under the 2010 Accounting Separation Decision.

⁶²⁸ "[Cost of Capital: Mobile Telecommunications, Fixed Line Telecommunications and Broadcasting \(Market A and Market B\), ComReg Document 14/136, Decision D15/14](#)" dated 18 December 2014 ('**2014 WACC Decision**').

⁶²⁹ See paragraphs 8.258 to 8.263 of the 2016 Consultation.

Respondents' Views

- 7.124 3 out of 12 Respondents expressed views on ComReg's approach to the imposition of accounting separation remedies.
- 7.125 ALTO and BT, while generally supportive of ComReg's approach, proposed amendments to existing Accounting Separation obligations.
- 7.126 Eircom was of the view that ComReg has failed to consider the implications of maintaining Accounting Separation obligations and argued that such obligations are not proportionate. Instead, they suggested that historic or current cost accounting models should be deployed in Eircom's regulatory accounts. ComReg has summarised Respondents views according to the themes identified below, namely:
- (a) Historic or current cost accounting models should be deployed in Eircom's regulatory accounts (discussed in paragraphs 7.127 to 7.132 below); and
 - (b) Greater clarity is required regarding the proposed Accounting Separation obligations (discussed in paragraphs 7.135 to 7.138 below)

Historic or current cost accounting models should be deployed in Eircom's regulatory accounts

- 7.127 Some respondents to the 2016 consultation suggested that Eircom's regulatory accounts which currently are based on historic cost accounting as outlined in the 2010 Accounting Separation Decision, should also include historic or cost accounting models.
- 7.128 ALTO and BT considered the existing Accounting Separation obligations to be ineffective and argued that historic or current costs accounting models should be deployed in Eircom's regulatory accounts.

Greater clarity is required regarding the proposed Accounting Separation obligations

- 7.129 Eircom noted that the proposed Accounting Separation obligations did not specify as to where Eircom is required to publish information for the LB TI WHQA Market and WEILs. Eircom proposed to include this information as part of the unaudited Additional Financial Information file submitted privately to ComReg and include it under 'Wholesale Other Residual Regulated Market' category within published Separated Accounts.

7.130 In Eircom's view the declining number of LB TI WHQA products and the fact that the active elements of the relevant network platforms are largely depreciated provide justification for not breaking out information for the LB TI WHQA Market. In relation to WEILs, Eircom expressed its belief that it would be difficult to maintain the proposed obligations given the immaterial nature of this product to date.

ComReg's Assessment of Respondents' Views

7.131 ComReg assesses Respondent's views on the themes identified above in paragraph 7.128 as follows:

- (a) Historic or current cost accounting models should be deployed in Eircom's regulatory accounts (discussed in paragraph 7.132 to 7.134 below); and
- (b) Greater clarity is required regarding the proposed Accounting Separation obligations (discussed in paragraphs 7.135 to 7.138 below).

Historic or current cost accounting models should be deployed in Eircom's regulatory accounts

7.132 In respect of the suggestion to include models as suggested in paragraphs 7.127 and 7.128 above, ComReg considers that such an evolution would be impractical as many distinct cost models are used to derive cost oriented tariffs for a broad portfolio of wholesale products, subject to such a remedy. Furthermore, many of the models contain confidential information and are justifiable in respect of the LB TI WHQA Market.

7.133 In summary, ComReg is of the view that the general obligations to provide TD historic separated accounts as outlined in the 2010 Accounting Separation Decision is appropriate for the LB TI WHQA market. Furthermore, it should be noted that as an audit opinion applies to the published separated accounts, the inclusion of cost models would be beyond the remit of audit standards. ComReg considers that it is sufficient to retain the existing obligations to produce separated historic costs accounts for leased line products and to maintain and develop cost models through a separate process, which considers the historic cost details, reflected in the separated accounts.

7.134 Such an approach provides ComReg with two perspectives. Firstly, a perspective based on a TD Historical Accounting and secondly, one based on a BU-LRAIC plus methodology.

Greater clarity is required regarding the proposed Accounting Separation obligations

- 7.135 ComReg notes Eircom's views summarised in paragraph 7.129 above. In this regard, ComReg clarifies that Eircom currently do not publish information for each of the Relevant WHQA Market(s) separately. Such disaggregated information is provided to ComReg on a confidential basis in the form of Additional Financial statements ('**AFS**') and Additional Financial information ('**AFI**') data. This can contain commercially sensitive data from Eircom, which cannot be published or shared readily with industry stakeholders.
- 7.136 Eircom, in its response to the 2016 Consultation noted that ComReg has not specified how it is required to publish financial information associated with the LB TI WHQA products. ComReg is of the view that the obligation to publish results for the consolidated WHQA markets will remain, and not be disaggregated by product and/or geographic market.
- 7.137 ComReg is also of the view that the LB TI WHQA Market, that this information will still be provided as part of the suite of confidential reports encompassed in the AFS and AFI results. In this context ComReg is conscious of the declining scale of cost and revenues associated with TI LB WHQA products and will reflect this in the reporting options available in the AFS and AFI structures within the accounting separation results.
- 7.138 In conclusion, ComReg's view is that as the scale of revenues and costs associated with the TI LB market declines, a more reasonable treatment would be to report the separation of values in the Additional Financial Information ('**AFI**') report, which is outside the audited opinion obligation.

ComReg's Position on Accounting Separation Remedies

- 7.139 Having considered Respondents' view in paragraphs 7.135 to 7.138 above, ComReg has decided to maintain its position as set out in the 2016 Consultation and to impose the associated Accounting Separation obligations (as set out in the 2010 Accounting Separation Decision) upon Eircom without change.
- 7.140 The accounting separation obligations are set out in Section 11 of the Decision Instrument attached at Appendix: 4 of this Further Consultation.

7.2.7 Decision Instrument for the LB TI WHQA Market

Preliminary view set out in the 2016 Consultation

7.141 In the 2016 Consultation ComReg had set out a draft Decision Instrument⁶³⁰ which was designed to give legal effect to the proposed LB TI WHQA remedies. ComReg sought views as to whether the wording of the draft Decision Instrument (including the definitions and interpretations used) accurately captured the intentions expressed by ComReg in relation to the proposed remedies. ComReg notes that comments on the wording of the draft Decision Instrument would be addressed separately to comments on the proposed remedies themselves.

Respondents' Views

7.142 4 of the 12 Respondents provided views on the wording of the draft Decision Instrument, namely ALTO, BT, Eircom and HEAnet. ALTO, BT and HEAnet reiterated their disagreement with ComReg's proposal to de-regulate the MI WHQA Market. ALTO and BT also expressed views on the substance of the proposed remedies themselves which are set out above from paragraph 7.5 onwards.

7.143 Eircom reiterated its view that price control obligations would need to be re-specified and sunset provisions would need to be removed. Eircom had some additional comments on particular aspects of the wording in the draft Decision Instrument.

7.144 Eircom considered that section 6.1 of the draft Decision Instrument was unclear and suggested additional wording to clarify which services are subject to regulatory obligations.

7.145 Eircom was of the view that wording in Section 7.4 (iv) of the draft Decision Instrument suggested that the scope for the application of obligations extends beyond what is specified in Section 6.1 and proposed amendments to the wording.

7.146 Eircom also proposed amendments to wording in Section 8.2 (vii) of the draft Decision Instrument for further clarity.

7.147 Eircom noted that Section 9 of the draft Decision Instrument should refer only to Section 7 as Section 8 does not set out any products, services or facilities.

7.148 Eircom indicated that Sections 9.1(i) and 9.1(ii) of the draft Decision Instrument are redundant given the specification of EoO standard application in Section 9.2 and, thus, should be deleted.

⁶³⁰ See Appendix: 8 of the 2016 Consultation.

- 7.149 Eircom indicated that word Undertaking should be written as Undertaking in Section 9.3 of the draft Decision Instrument as this is a defined term.
- 7.150 Eircom also proposed amendments to wording in Section 11.1 of the draft Decision Instrument for further clarity.
- 7.151 Finally, Eircom reiterated its view in relation to sunset provisions, but noted that if ComReg decides to maintain such provisions, wording in Section 14.1 of the draft Decision Instrument should be amended to reflect (in Eircom's view) clearer definition of scope of services subject to sunset provisions.

ComReg's Consideration of Respondents' Views

- 7.152 In relation to Eircom's comment on the detailed drafting of the Draft Decision Instrument contained in Appendix 8 to the 2016 Consultation⁶³¹, ComReg has given these comments detailed consideration, and has made a number of consequent textual changes to the Draft DI where it considers it appropriate to do so. Where no textual change has been made to the Decision Instrument, ComReg either disagrees with Eircom's underlying position (e.g. in relation to sunset clauses), or considers that Eircom's proposed textual amendments would be either inaccurate, misleading, inappropriate or unhelpful.

ComReg's Preliminary Position

- 7.153 Having considered Respondents' views, ComReg has decided to make a number of amendments to the language contained in a number of sections of the Draft DI now contained in Appendix: 4 to this Further Consultation, as described in section 7.2.7 above ComReg has made some additional changes to the wording of the draft Decision Instrument for the purpose of clarifying the nature of certain obligations contained therein. However, these changes do not impact the substance of the overall obligation and the outcomes remain effectively the same. Any substantive changes to obligations contained in the Decision Instrument are described in detail in this Section 7 above.

⁶³¹ See pages 26-27 of Eircom's Submission.

7.3 ComReg's Overall Preliminary Position on Remedies in the LB TI WHQA Market

7.154 ComReg remains of the preliminary position that it is justified in imposing remedies on Eircom in LB TI WHQA Market because:

- (a) Eircom is likely to have SMP in LB TI WHQA Market⁶³²; and
- (b) Eircom has the ability and incentive to engage in a range of identified competition problems that are likely to arise in the LB TI WHQA Market absent regulatory intervention.⁶³³

7.155 In summary, ComReg proposes to impose the following obligations on Eircom.

7.156 Insofar as access obligations are concerned Eircom is to be required:

- (a) to meet reasonable requests for access to LB TI WHQA products, services and facilities;
- (b) to provide access to specific LB TI WHQA products, namely PPC EULs in the bandwidth range 64Kb/s up to and including 2Mb/s;
- (c) to provide access to specific Interconnection Services, namely PPC Transport Links (including ISH and CSH variants);
- (d) to negotiate in good faith with Undertakings requesting Access;
- (e) not to withdraw Access to facilities already granted without the prior approval of ComReg;
- (f) to grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities;
- (g) to provide access to specified information which supports existing and future wholesale leased lines;
- (h) to provide access to OSS or similar software systems necessary to ensure fair competition in the provision of services, and
- (i) to provide access in accordance with a range of conditions governing fairness, reasonableness and timeliness.

⁶³² See Section 5.2.1 of this Further Consultation.

⁶³³ See Section 6 of this Further Consultation.

7.157 Insofar as Non-Discrimination Obligations are concerned, these are to be applied on, at least, an EoO basis, with Eircom being required to:

- (a) apply equivalent conditions in equivalent circumstances to other Undertakings requesting, or being provided with Access (including Access to LB TI WHQA products, services and facilities) or requesting or being provided with information in relation to such Access; and
- (b) provide access (including access to LB TI WHQA products, services and facilities) and information to all other Undertakings under the same conditions and of the same quality as Eircom provides to itself or to its subsidiaries, affiliates or partners.

7.158 Insofar as Transparency Obligations are concerned, Eircom is to be subject to the following obligations:

- (a) Obligation to publish and maintain a LLRO;
- (b) Obligation to publish and maintain a Network Price list for the products in scope;
- (c) Obligation to publish changes to the LLRO and wholesale prices, in advance of their coming into effect, and to notify ComReg in advance of publication;
- (d) Obligation to publish KPIs subject to amendments outlined in the 2016 Consultation⁶³⁴;
- (e) Obligation to publish an SLA; and
- (f) Requirements governing sharing of confidential and/or commercial information through a non-disclosure agreement.

7.159 Insofar as Price control and Cost Accounting obligations are concerned:

- (a) an obligation of cost orientation will continue to apply to LB TI WHQA LL PPC products (including interconnect facilities known as Transport Links);
- (b) Cost orientation is to be based on a BU-LRAIC+ cost modelling approach. using the TI PPC EUL Modified Technology Cost Model. This model is based on a hybrid current cost accounting, modified to reflect cost trends for SDH infrastructure used to provide LB TI WHQA PPCs and Transport Links.
- (c) As a consequence the maximum prices as currently published in the LLRO Price List for EUL PPC products ≤2Mb/s capacity will pertain for the relevant control period.

⁶³⁴ See paragraphs 8.138 to 8.144 of the 2016 Consultation.

- 7.160 Insofar as Cost Accounting and Accounting Separation obligations are concerned, existing obligations will continue to apply.
- 7.161 The above obligations are set out in the Decision Instruments set out in Appendix: 4 of this Further Consultation.

Question 5: Do you have any further observations on this Section 7 concerning obligations in the LB TI WHQA Market?

8 Competition Problems in the Zone B MI WHQA Market and Impacts on Competition and Consumers

8.1 Overview

- 8.1 In this Section ComReg now seeks to identify those competition problems which, absent regulation⁶³⁵, could potentially arise in the Zone B MI WHQA Market and, having done so, ComReg proceeds in Section 9 to consider the imposition of appropriate remedies to address these identified competition problems.
- 8.2 In Section 5.7.2 above, ComReg set out its preliminary view that, in accordance with Regulation 27(4) of the Framework Regulations, the Zone B MI WHQA Market is not likely to be effectively competitive and proposed that Eircom should be designated as having SMP in this market.
- 8.3 In accordance with Regulation 27(4) of the Framework Regulations, where an Undertaking is designated as having a position of SMP in a relevant market, ComReg is required to impose on that Undertaking each of the obligations (or remedies) set out in Regulations 9 to 13 of the Access Regulations, as ComReg deems appropriate.
- 8.4 As noted in the European Commission's Explanatory Note to the 2014 Recommendation, the underlying purpose of the ex-ante regulatory framework is to deal with predictable competition problems that have their origin in structural factors in the industry. For example, the finding of an absence of effective competition in the Zone B MI WHQA Market indicates the potential for competition problems to arise within them over the review period in question, thereby justifying the imposition of ex ante regulation.

⁶³⁵ WHQA products have to date been provided by Eircom pursuant to regulatory obligations imposed on it under the 2008 Decision (and subsequent decisions). The assessment carried out in this Section of the Consultation is carried out in the context of what competition problems would be likely assuming that such SMP obligations were not in place.

- 8.5 It is ComReg's preliminary view that the underlying ability and incentives for Eircom to potentially engage in anti-competitive behaviour absent regulation is due to the lack of effective competition in the Zone B MI WHQA Market, coupled with Eircom's position as a vertically integrated supplier competing with its wholesale customers in the horizontally related Zone A MI WHQA market and related downstream markets such as the retail MI LL market.
- 8.6 ComReg would note that it is neither necessary to catalogue examples of actual abuse nor to provide exhaustive examples of potential abuse. Rather, the purpose of ex ante regulation is to prevent the possibility of abuse of dominance given that Eircom has been identified on a preliminary basis as having SMP in the Zone B MI WHQA Market.

8.2 Types of Competition Problems

- 8.7 In determining what form of ex ante regulatory remedies are justified in the Zone B MI WHQA Market, ComReg has carried out an assessment of potential competition problems that are likely to arise, assuming regulation is absent and taking account of the structure and characteristics of the Zone B MI WHQA Market.
- 8.8 In the absence of regulation in the Zone B MI WHQA Market, ComReg considers that Eircom would have the ability and incentive to influence competition through effects on prices, innovation, output and the variety or quality of goods and services provided. In general, there are a number of competition problems that may arise when an SMP operator seeks to:
- (a) Exploit customers or consumers by virtue of its SMP position;
 - (b) Exclude or delay investment and market entry in the Zone B MI WHQA Market (and ultimately downstream markets; and
 - (c) Leverage its market power into adjacent vertically or horizontally related markets with a view to foreclosing or excluding competitors in downstream markets.
- 8.9 In considering the above competition problems that could arise⁶³⁶, ComReg has also been guided by experience in the market. Although it is not necessary per se to demonstrate actual abuse, examples of competition problems which have previously arisen even in the presence of existing regulation, can help ground the analysis in actual experience.

⁶³⁶ Such issues are also considered in Section 9 in the context of appropriate remedies (regulatory obligations) to address completion problems.

8.2.1 Exploitative Practices

8.10 Economic theory suggests that where a firm holds market power it is in a position to increase prices above competitive levels and/or reduce output below competitive levels, thereby earning higher than normal profits. These higher profits effectively create a wealth transfer from the consumer to the firm with market power. It is ComReg's preliminary view that Eircom is the Undertaking with SMP in the Zone B MI WHQA Market and, given its presence in a number of adjacent markets, Eircom would have the ability and incentive to engage in exploitative practices. Such exploitative practices could include excessive pricing, inefficiency or inertia to the ultimate detriment of End-Users. These potential concerns are considered below.

Excessive pricing

- 8.11 According to EU competition case law, excessive pricing refers to a situation where the prices charged by a dominant Undertaking are not closely related to the value to the consumer and/or the cost of producing or providing the relevant service.⁶³⁷ Concerns about excessive pricing arise where, absent regulation, price levels are likely to be persistently high with no effective pressure (e.g. from new entry or innovation) to bring them down to competitive levels over the period of the review.
- 8.12 Eircom's presence in the Zone B MI WHQA Market is characterised by a high market share (as set out in paragraph 5.132, at the end of 2016 Eircom's market share was [\geq [REDACTED]]⁶³⁸), highlighting an absence of existing effective competition, high and non-transitory barriers to entry associated with control over infrastructure not easily replicated, limited scope for potential competition and insufficient CBP. Thus, there is likely to be insufficient pressure to constrain Eircom from behaving, to an appreciable extent, independent of its customers, competitors or consumers.
- 8.13 Furthermore, there is also insufficient pressure to prevent Eircom from engaging in excessive pricing behaviour in the Zone B MI WHQA Market⁶³⁹. Hence, ComReg considers that Eircom is likely to have incentives to exploit its Zone B MI WHQA customers in this manner as it competes with these SPs in downstream retail and/or related wholesale markets.

⁶³⁷ Case C 27/76 United Brands v. Commission, [1978] ECR 207, [1978] 1 CMLR 429, paragraph 250. In United Brands the Court of Justice of the European Union held that: "...charging a price which is excessive because it has no reasonable relation to the economic value of the product supplied would be... an abuse".

⁶³⁸ Over 70%.

⁶³⁹ As noted in paragraph 1.24 Eircom's wholesale prices in the WHQA Market are currently regulated under the 2012 Price Control Decision.

- 8.14 For example, by raising the price of Zone B MI WHQA inputs above the competitive level, this would raise input costs for those SPs that purchase Eircom's MI WHQA products/services (assuming Eircom would provide them with such inputs absent regulation) in order to offer services in the downstream retail and/or wholesale markets. Given that such above cost wholesale prices may be passed on by SPs to their retail and/or wholesale customers via higher prices, it would raise their input costs. These would likely have to be passed on to downstream customers (or potentially absorbed by the SP in the short-run), and ultimately lead to distortions of competition in downstream retail and/or wholesale markets – for example, SPs' customers could, in response to price increases, switch to Eircom potentially undermining the SPs revenues and cause them to potentially exit from the relevant market. In this way, Eircom's excessive pricing of MI WHQA inputs could lead to the exclusion of competitors (who purchase these MI WHQA inputs) from the downstream retail and/or wholesale markets, and ultimately hinder effective competition in these markets.
- 8.15 Excessive prices can pose a deterrent to entry in downstream markets and also distort investment incentives as the higher charges raise costs of production for the SPs that purchase from Eircom and thereby constrain their ability and incentive to invest in additional infrastructure.
- 8.16 To address the potential for excessive pricing in the Zone B MI WHQA Market, ComReg considers that ex ante regulation is required. Competition law applied on an ex-post basis is often unsuitable in preventing excessive pricing, and this is evidenced by the scarcity of successful ex-post excessive pricing cases within EU jurisprudence. An ex-post approach to excessive pricing in markets such as the Zone B MI WHQA Market which is characterised by a lack of effective competition and high and non-transitory entry barriers, is not likely to offer adequate protection for consumers or promote effective competition. This is because addressing the issue of excessive pricing through competition law approaches (if it is proven to the required competition law standard) would likely occur substantially after the occurrence of the competition problem itself, thereby contributing to significant uncertainty amongst downstream market participants in the interim and undermining the development of effective competition to the detriment of consumers.

8.17 Eircom's MI WHQA products are currently regulated via various price control obligations as set out in section 9.3.4 below. Absent such regulation, ComReg considers that prices for such products would not likely be set at a competitive level⁶⁴⁰. Given the ability and incentives for Eircom, as the SMP Undertaking, to engage in excessive/exploitative pricing, transparency, price control and related cost accounting obligations are therefore considered justified by ComReg to ensure that prices are set at levels that are reflective of the underlying efficient cost of providing these products and that such charges are applied in a non-discriminatory fashion to other Access Seekers and between Access Seekers and Eircom to itself.

8.2.2 Exclusionary practices

Leveraging

- 8.18 Where a vertically integrated Undertaking has SMP in one market that has close links with other adjacent markets either at a similar (e.g. horizontal) or different (e.g. vertical) level in the production or distribution chain, the SMP Undertaking may attempt to transfer (leverage) its market power to such vertically and/or horizontally related markets. This could enable the SMP Undertaking to strengthen its position in those related markets and/or potentially reinforce its existing market power in the SMP market in question.
- 8.19 Given the close relationship between the Zone A MI WHQA Market and other horizontally related markets (e.g. Zone B MI WHQA⁶⁴¹) and vertically related markets (e.g. WLA and retail LL market(s)), there is potential for leveraging to occur, absent regulation. Leveraging may raise rivals' costs, introduce barriers to effective access to MI WHQA products, services and facilities in a timely manner, reduce competitive pressures on related wholesale/retail services and enable the SMP Undertaking to extract additional revenues from its competitors, customers and ultimately consumers.

Vertical Leveraging

- 8.20 Vertical leveraging arises where a vertically integrated Undertaking is able to leverage its SMP position at one level in the production or distribution chain into downstream markets in which it is also active.

⁶⁴⁰ For example, pricing that allows Eircom to recover its efficiently incurred costs plus a reasonable rate of return.

⁶⁴¹ For example, an Access Seeker may purchase MI WHQA services in both the Zone A MI WHQA Market and the Zone B MI WHQA Market from the same supplier. Absent a wholesale supplier having the ability to serve these needs, its position in both these markets may be undermined.

- 8.21 In the context of the Zone B MI WHQA Market, vertical leveraging may occur given that Eircom, as the proposed SMP Undertaking, has the incentive to use its market power in this market to ultimately affect the competitive conditions in downstream retail markets, in particular, through its ability to control the key network inputs used by Access Seekers - which compete against Eircom in these downstream markets. This could result in a distortion of, or reduction in, competition in these downstream markets, thus potentially resulting in harm to consumers in the form of higher prices, lower output/sales, reduced quality or consumer choice.
- 8.22 ComReg considers that, absent regulation, vertical leveraging could arise in the Zone B MI WHQA Market, because Eircom is a vertically-integrated Undertaking, has SMP in this market, and has the ability and incentive to leverage that market power into downstream markets, including (but not limited to) the provision of retail LL services. This would serve to enhance its market power in these downstream markets.
- 8.23 In this regard, ComReg notes that most of retail LLs are purchased by Multi-site customers⁶⁴². As noted in Section 3 above, the majority of these customers tend to select one SP for the provision of retail LL services to all of their premises that can frequently be located in both the Zone A MI WHQA and the Zone B MI WHQA Markets. Thus, ComReg considers that the nature of the demand for retail MI LL services, further enhances Eircom's ability and incentive to leverage its market power in the Zone B MI WHQA Market into the retail MI LL market as Eircom has a strong competitive advantage in terms of its network reach to Multi-site retail LL customers' premises when compared to the reach of other SPs' networks⁶⁴³. ComReg considers that Eircom is likely to have the ability and incentive to foreclose access to Zone B MI WHQA services and leverage that market power into the retail MI LLs market.

Non-Price Based Vertical Leveraging Behaviour

- 8.24 Vertical leveraging could be undertaken by Eircom in a number of ways, absent regulation in the Zone B MI WHQA Market. For example, vertical leveraging can manifest as an outright refusal to supply or a constructive refusal to supply. Refusal to supply is particularly relevant when the SMP operator is vertically integrated which facilitates the SMP operator to gain strategic advantage over rivals in the downstream markets.

⁶⁴² See Table 2 above.

⁶⁴³ See Table 16: above.

8.25 Other examples of non-price vertical leveraging, which can be closely related to each other, can amount to constructive rather than outright denial of access, including:

- (a) **Delaying tactics:** this relates to issues such as protracted negotiations with respect to the supply of existing or new MI WHQA products, services or associated facilities to downstream competitors. Another example would be the use of retail contract terms to effectively dissuade a customer from moving to a competing SP in a timely manner, thereby undermining the effectiveness of access to MI WHQA products, services and facilities. Eircom, as the SMP operator, has the ability and incentive to engage in a 'first mover advantage' by offering a retail offering before an equivalent wholesale product is made available to potential Access Seekers. This first mover advantage has the potential to raise the Access Seekers' costs relative to the SMP operator and restrict the Access Seekers potential future retail sales.
- (b) **Quality discrimination:** providing competitors with MI WHQA products at a lower quality of service (or inferior information) to that which Eircom provides to its own downstream arm (or to certain other competitors). For example, Eircom could give priority to its own customers when repairing faults or upgrading network assets.
- (c) **Creating or exploiting information asymmetries and the withholding of relevant information:** where competitors are dependent on Eircom to provide MI WHQA and need certain (quality or technical) information in order to effectively compete in the downstream retail and/or wholesale market, a lack of transparency or asymmetry in the provision of relevant information can impede competition. For example, a lack of transparency in the terms and conditions of supply for MI WHQA products that are self-supplied by Eircom could make it difficult for Access Seekers to make effective commercial or operational decisions that involve the use of MI WHQA inputs in the provision of their own downstream services. Such a lack of transparency could also fail to assure Access Seekers that low bandwidth MI WHQA products are provided on a non-discriminatory basis (including whether Eircom is in a position to demonstrate that there is equivalence of access).
- (d) **Disproportionate entry/use criteria:** This may, for example, include Eircom setting unreasonable terms and conditions for supply/use of access to MI WHQA products (including associated facilities). An example of this behaviour would include an undue requirement to use a particular (more expensive) technology beyond the extent which might be economically or technically justified.

- (e) **Unwarranted withdrawal of access already granted:** Eircom could seek to unreasonably withdraw access to facilities already granted.
- (f) **Unreasonable product bundling/tying:** this could include the bundling/tying of MI WHQA products in such a way that it damages the ability of Access Seekers to compete downstream. For example, if Eircom required Access Seekers using MI WHQA services to also purchase additional and unnecessary services that raises Access Seekers' costs of providing downstream retail services, this could damage their ability to compete effectively.

8.26 Further examples of the above non-price leveraging behaviours arise where a vertically-integrated SMP Undertaking may create or exploit information asymmetries to the detriment of downstream competition. This could include for example any differences in interface between the SMP Undertaking's internal access to IT systems, and wholesale customers' access. The infrastructure associated with OSS and Business Support Systems ('**BSS**') is supported by IT systems, which evolve over time. Where, for example, Access Seekers do not have visibility or input into relevant Eircom's IT system changes and are not aware of the IT development process and its timetable, they will be unable to contribute or to make a request for service at the appropriate point. Moreover, it may be the case that operational changes of this kind are not implemented simultaneously or to the same standard for external and internal access.

Information Asymmetries

- 8.27 Given that Eircom is vertically integrated, it may also be difficult to compare the MI WHQA products (and associated facilities) its uses internally with those offered to Access Seekers, as well as to compare how MI WHQA products are developed and implemented. A lack of transparency in how products are both developed and implemented internally could also make it difficult to demonstrate equivalence and could provide an incentive for non-price means of leveraging market power. For example, in terms of product offerings, absent regulation, Eircom, as the Undertaking proposed to be designated with SMP in the Zone B MI WHQA Market, could make downstream retail products using MI WHQA inputs which Access Seekers could not match, because no wholesale equivalent has been made available. In terms of product implementation, if Access Seekers are not aware of all the features of the wholesale products which are available to Eircom internally, they will not know that they can request these features themselves, and ultimately may find themselves offering an inferior product at the retail level. Furthermore, where certain MI WHQA services/information necessary for preparing a bid/tender proposal for a customer contract are not made available to competitors in sufficient time, this could also impede their ability to compete with the SMP operator for important downstream customers.
- 8.28 Another example of information asymmetries could include situations where Access Seekers require metrics on order processing, service delivery and fault repair to view the overall performance of Eircom's MI WHQA products from a provisioning and service assurance perspective. Failure by Eircom to provide such data to its wholesale customers would likely impair their ability to compare the performance of Eircom's supply of wholesale products. Uncertainty for Access Seekers (and their retail and/or wholesale customers) as to the performance and quality of their purchased MI WHQA inputs relative to the services and information made available internally to Eircom's retail arm could potentially discourage participation in markets dependent upon Eircom's wholesale products (for example, through a lack of visibility of average line-fault repair time between Eircom retail and wholesale customer faults).

- 8.29 Information asymmetries may also apply to future planning by the SMP Undertaking. For example, changes by Eircom to its network topography such as its location of points of interconnection may have significant implications for Access Seekers using MI WHQA products. Insufficient notice of network and process changes relevant to the delivery of services in the retail market could significantly impede the ability of MI WHQA Access Seekers to launch corresponding retail products and to compete with Eircom on an equivalent basis in downstream markets. A lack of information and the associated uncertainty may discourage Access Seekers from investing in or expanding their network footprint (to avail of MI WHQA products)⁶⁴⁴ or downstream footprint (since there may be a perceived risk of stranded assets). Furthermore, such information asymmetries may lead to a delayed consideration of Access Seekers' wholesale requirements as part of such network developments, also delaying/impeding their ability to respond to any new downstream offerings by the SMP Undertaking.
- 8.30 A vertically-integrated SMP Undertaking could also have an incentive to frustrate the retail/wholesale switching process through which retail customers can switch to an alternative product or an alternative SP. Access seekers may wish to migrate their downstream customers between wholesale products (or from wholesale products onto products offered on their own network), and may wish to carry out single or bulk migration of their customer base. This should involve minimal disruption or delay from the downstream customer's perspective. Examples of actions which could disrupt the migration process could include rejecting migration orders on the basis of technicalities which were not made known to the requesting Access Seekers, requesting additional customer authorisation agreements, or preventing the shift of a large number of retail customers to alternative service provision. This type of action would impose an additional and unnecessary switching cost on Access Seekers and ultimately retail customers.

⁶⁴⁴ Access Seekers' use of MI WHQA products depends on the extent of their backhaul network. Investing in backhaul depends on the location of Eircom's Points of Interconnection.

- 8.31 Further examples of potential leveraging behaviour related to the above could include possible disruption of customer migration processes such as failing to switch bundles of services in a seamless and co-ordinated manner (such that any service loss by the switching retail customer is minimised, if not entirely eliminated) and practices aimed generally at raising rivals' costs.⁶⁴⁵
- 8.32 ComReg considers that, absent regulation, these types of issues could arise in the Zone B MI WHQA Market given that Eircom is competing in downstream markets within which Access Seekers also compete or may seek to compete.

Price Based Vertical Leveraging Behaviour

- 8.33 Vertical leveraging may also be evident in pricing behaviour and, absent regulation, Eircom could attempt to foreclose competition in a downstream market by offering MI WHQA products at a price that would not allow an efficient Access Seeker to earn a sufficient margin and recover their efficiently-incurred costs.
- 8.34 This could result in the foreclosure of competition from an Access Seeker through margin squeeze. However, ComReg is of the view that access to MI WHQA services in Zone B at cost orientated prices is sufficient to ameliorate the competition problems that could arise in the retail MI LLs market due to Eircom's likely SMP in that market.
- 8.35 This is because, in the context of multi-site customers, competitors of Eircom in the retail MI LL market should be able to leverage the effective competition in the Zone A MI WHQA market along with MI WHQA in the Zone B MI WHQA market at cost orientated prices⁶⁴⁶ to compete effectively with Eircom in the retail MI LL Market. As such, the presence of an effective cost orientation obligation, the risks to effective competition in the retail MI LL market from a margin squeeze are likely to be negated.

⁶⁴⁵ Unlike predatory pricing, certain practices can be employed which unfairly raise rival's costs and reduce competition but which do not necessarily require the SMP Undertaking to incur short run losses. For example, an integrated firm with market power in an upstream market may have incentives to raise the price of the inputs it sells to its downstream rivals, thereby potentially raising their costs and reducing demand for their products. Furthermore, the integrated operator could potentially give priority to its own traffic at network bottlenecks or apply standards that are easier for its own retail affiliate to meet than for its downstream competitors. (See Krattenmaker, T.G. and S.C. Salop (1986) "Anticompetitive Exclusion: Raising Rival's Costs To Achieve Power over Price", Yale Law Journal, 96:209-93; Salop, S.C. and D.T. Scheffman (1987), "Cost-Raising Strategies", Journal of Industrial Economics, 36:19-34).

⁶⁴⁶ i.e. on the same price, terms and conditions as Eircom's retail arm

- 8.36 Price Discrimination could be used by a vertically integrated operator with SMP in the Zone B MI WHQA Market to raise an Access Seekers' costs downstream and induce a margin squeeze. This is achieved by charging a higher price (above cost) to downstream competitors than implicitly charged to its own retail arm. Such a margin squeeze between MI WHQA price and downstream LL prices could undermine the effectiveness of a MI WHQA product offering and, in doing so, could harm competition in downstream retail markets by eliminating competing SPs, distorting competition or discouraging the entry of new SPs. However, ComReg notes that the presence of an effective cost orientation obligation, the risks to effective competition in the retail MI LL market from price discrimination are likely to be negated.
- 8.37 Another example of pricing behaviour is predatory pricing. This could occur where a vertically integrated operator with SMP seeks to sell a MI WHQA product below the costs of production for a sustained period of time, with the intention of deterring market entry or putting a rival operator out of business, enabling the SMP operator to further increase its market power and later to raise prices. While consumers may benefit in the short run from low prices, consumer welfare is reduced in the long run due to the elimination of competition and consumer choice in the market. A vertically integrated operator with SMP upstream supplying an input to retail competitors might engage in predatory pricing at the retail level to expose retail competitors to a margin squeeze. However, ComReg is of the preliminary view that in the presence of an effective cost orientation obligation, the risks to effective competition in the retail MI LL market from predatory pricing are likely to be negated.

Horizontal Leveraging

- 8.38 Horizontal leveraging arises where an Undertaking with market power in one market is able to use it to exert undue influence into other markets that are at a similar level in the production or distribution chain. Examples of horizontal leveraging can include certain tying/bundling practices, cross subsidisation/predatory-type behaviour and/or where the SMP Undertaking may seek to foreclose infrastructure-based competitors by way of an insufficient economic space⁶⁴⁷ between the relative pricing of different upstream/intermediate inputs.

⁶⁴⁷ "Economic space" refers to an appropriate space between the pricing of related wholesale or intermediate products/services sufficient to promote sustainable infrastructure competition to the benefit of end-users.

- 8.39 In the context of this market review, horizontal leveraging may occur where Eircom, which is likely to have SMP in the Zone B MI WHQA Market, is competing in the horizontally adjacent Zone A MI WHQA Market and has the ability and incentive to negatively impact the position of its competitors in this market. Absent regulation in the Zone B MI WHQA Market, Eircom could be incentivised to cross-subsidise retail and/or wholesale services offered in the Zone A MI WHQA Market (e.g. lower prices for MI LLs). This would allow it to gain market share in the Zone A and by leveraging high market share in Zone B where it faces less infrastructure based competition from other SPs.
- 8.40 Furthermore, where SPs who compete in the Zone B MI WHQA market require MI WHQA services for network extension – such as for backhaul- Eircom is likely to have the ability and incentive to foreclose access to such services thus dampening competition in the Zone B MI WHQA market for related services, such as MI WHQA to premises.
- 8.41 ComReg considers that, absent regulation, these types of issues could arise in the Zone B MI WHQA Market given that Eircom is competing in downstream markets within which Access Seekers also compete or may seek to compete.

Other exclusionary practices

- 8.42 As with the examples of vertical and horizontal leveraging, the SMP operator may attempt foreclose competition in the Zone B MI WHQA Market by engaging in conduct aimed at defending its position and/or foreclosing the market.
- 8.43 ComReg's preliminary view is that exclusionary behaviour that is likely to take place in the Zone B MI WHQA Market is behaviour closely associated with the ability and incentives of a vertically-integrated SMP Undertaking, as discussed in paragraphs 8.18 to 8.41 above, in the context of leveraging and the exclusionary impacts in horizontally or vertically related markets. These include (but are not limited to) foreclosing competition by:
- (a) Refusing to supply access, applying unreasonable or discriminatory terms and conditions of access, and/or creating or exploiting information asymmetries;
 - (b) Engaging in exclusive contracts with downstream customers and exclusionary actions aimed generally at raising customer or consumer switching costs thereby impacting on potential competition; and
 - (c) Raising costs of those competitors that rely on Eircom's MI WHQA inputs in providing downstream retail and/or wholesale services.

- 8.44 ComReg is of the preliminary view that, as the vertically integrated Undertaking with SMP in the Zone B MI WHQA Market, Eircom has both the ability and incentives to restrict or distort the development of competition in the Zone B MI WHQA Market.

8.3 Overall Preliminary conclusions on competition problems in the Zone B MI WHQA Market

- 8.45 Having regard to the analysis set out in paragraphs 8.7 to 8.44, ComReg set out its preliminary view that, absent regulation, Eircom, as the SMP Undertaking in the Zone B MI WHQA Market has the ability and incentive to engage in actions which could negatively impact on competition and customers in related retail and/or wholesale markets, as well as having the potential to reinforce its market power in the Zone B MI WHQA Market over time.
- 8.46 ComReg has presented examples of such potential behaviour and, therefore, considers that it is justified and proportionate to impose obligations on Eircom in the Zone B MI WHQA Market relating to access, transparency, non-discrimination, price control and cost accounting and accounting separation. The details of these obligations are discussed in Section 9 below.

Question 6: Do you agree that the competition problems and the associated impacts on competition consumers identified are those which could potentially arise in the Zone B MI WHQA Market? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views on competition problems in the Zone B MI WHQA

9 Proposed remedies in the Zone B MI WHQA Market

9.1 Introduction

- 9.1 In Section 5 ComReg set out its preliminary view that Eircom has SMP in Zone B of the MI WHQA Market and in Section 8 ComReg identified a range of competition problems and competition and consumer impacts that, absent regulation, could arise in this Zone B WHQA Market (and related markets) as a result.
- 9.2 ComReg's preliminary view is that the imposition of a full suite of obligations including access, non-discrimination, transparency, price control and accounting separation is warranted to address the competition concerns identified in Section 8 above. ComReg notes that some Respondents, having regard to their views that the MI WHQA Market should be subject to regulation, also expressed the view that remedies were required. Such comments were largely generic in nature and, as such, we do not reference them in the analysis below.
- 9.5 This Section is set out as follows:
- (a) ComReg's approach to specifying remedies, including the legal framework for their imposition (discussed in paragraphs 9.6 to 9.11);
 - (b) remedies that are currently in place under the 2008 Decision⁶⁴⁸ (and subsequent decisions) (discussed in paragraphs 9.12 to 9.33);

⁶⁴⁸ Subsequent to the 2008 Decision, ComReg also made a number of other decisions related to the remedies/obligations imposed in the 2008 Leased Lines Wholesale Market including:

- (a) **2009 Ethernet Determination** which explicitly noted that a request for uncontended wholesale Ethernet access falls within the market for wholesale terminating segments of leased lines and is subject to the obligations imposed on Eircom by ComReg Decision Notice D07/05. These obligations include but are not limited to obligations of access and non-discrimination. Refer to "[Determination in the dispute between BT Ireland and Eircom Limited in relation to alleged failure by Eircom to provide Leased Line termination segments based on uncontended Ethernet access, ComReg Document 09/58](#)", dated 14 July 2009
- (b) **2011 Access and Transparency Decision** which amended transparency and access obligations. Refer to "[Amendments to the transparency obligation and the access obligation in the market for wholesale terminating segments of leased lines, ComReg Document 11/22, Decision D02/11](#)", dated 22 March 2011. (**2011 Access and Transparency Decision**) ; and

- (c) an assessment of the approaches available to impose remedies (discussed in paragraphs 9.34 to 9.40);
- (d) proposed regulatory remedies in the Zone B MI WHQA Market subject to SMP relating to access, non-discrimination, transparency, price-control and cost accounting, and accounting separation, as well as the withdrawal of certain remedies (discussed in paragraphs 9.41 to 9.449); and
- (e) ComReg's overall preliminary conclusions on the imposition of remedies in the Zone B MI WHQA Market subject to SMP, along with the relevant consultation questions on which respondents' feedback is sought (discussed in section 9.6 below).

9.2 Approach to Specifying and Implementing Remedies

9.6 In Section 5, ComReg set out its preliminary view that Eircom has SMP in the Zone B MI WHQA Market and identified a range of competition problems and competition or consumer impacts that, in the absence of regulation, could arise in this and related markets. These competition problems relate to, amongst other things, Eircom having the ability and the incentive to foreclose competition and/or exploit wholesale (and retail) customers, ultimately to the detriment of competition and consumers. In this Section, ComReg considers the imposition of regulatory remedies (or obligations) to address these competition problems. To this end ComReg sets out the legal framework for imposing remedies below.

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- (c) **2012 Pricing Decision** which further specified the price control obligations and in particular, methodologies used to derive regulated prices for Eircom's WLL, PPC and wholesale Ethernet services. Refer to "[A final decision further specifying the price control obligation in the market for wholesale terminating segments of leased lines, ComReg Document 12/03, Decision D02/12](#)", dated 2 February 2012. (**'2012 Pricing Decision'**).
 - (d) It should also be noted that the WHQA market was broadly identified in the 2007 Recommendation as the market for wholesale terminating segments of leased lines (**'2007 Wholesale Leased Lines Recommended Market'**). As noted in paragraph 1.16, the 2007 Wholesale Leased Lines Recommended Market has been identified by ComReg as being susceptible to *ex ante* regulation and was thus regulated by ComReg pursuant to the 2008 Decision.

9.2.1 Legal Framework for Imposing Remedies

9.7 In accordance with Regulation 8(1) of the Access Regulations⁶⁴⁹, where an operator is designated as having SMP in a relevant market, ComReg is required⁶⁵⁰ to impose on such an operator the obligations set out in Regulations 9 to 13 as ComReg considers appropriate. In this regard, the obligations that may be imposed by ComReg on SMP Undertakings are those relating to:

- (a) Access;
- (b) Transparency;
- (c) Non-Discrimination;
- (d) Price Control and Cost Accounting; and
- (e) Accounting Separation.

9.8 In addition, Regulation 8(6) of the Access Regulations provides that any of the above obligations imposed must:

- (a) be based on the nature of the problem identified;
- (b) be proportionate and justified in the light of the objectives laid down in Section 12 of the Communications Regulation Acts 2002 (as amended) and Regulation 16 of the Framework Regulations⁶⁵¹; and
- (c) only be imposed following public consultation and notification of the draft measures to the European Commission, BEREC and other NRAs in accordance with Regulation 12 of the Framework Regulations.

⁶⁴⁹ European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) (the '**Access Regulations**'). The SMP Guidelines also state at paragraph 17 that "NRAs must impose at least one regulatory obligation on an Undertaking that has been designated as having SMP".

⁶⁵⁰ The SMP Guidelines also state at paragraph 17 that "*NRAs must impose at least one regulatory obligation on an Undertaking that has been designated as having SMP*".

⁶⁵¹ Pursuant to section 12 of the Communications Regulation Acts 2002 (as amended), ComReg's relevant objectives in relation to the provision of electronic communications networks and services are: (i) to promote competition, (ii) to contribute to the development of the internal market, and (iii) to promote the interests of users within the Community. Regulation 16 of the Framework Regulations further specifies ComReg's obligations.

- 9.9 Regulations 12(1) and 12(4) of the Access Regulations also provide statutory criteria that ComReg must take into account before imposing access obligations on an SMP Undertaking. These criteria include, inter alia, examining the technical and economic viability of using or installing competing facilities; the feasibility of providing access; the initial outlay of investment by the Undertaking; and the need to safeguard competition in the long term.
- 9.10 Regulation 13(2) and Regulation 13(3) of the Access Regulations provide that ComReg is also required, when imposing price control obligations, to:
- (a) take into account the investment made by the SMP operator which ComReg considers relevant and allows such an operator a reasonable rate of return on capital employed, taking into account any risks involved specific to a particular new network investment project⁶⁵²; and
 - (b) ensure that any cost recovery mechanism or pricing methodology that ComReg imposes serves to promote efficiency and sustainable competition and maximise consumer benefits⁶⁵³.
- 9.11 These considerations are taken into account throughout this Section, as appropriate, when assessing whether and what form of remedy to impose, and are also discussed in further detail in the context of the Regulatory Impact Assessment ('RIA') found in Section 11 of this Further Consultation. ComReg has also taken the following into account in considering the imposition of remedies on the SMP operator:
- (a) the European Regulators Group's ('**ERG**'⁶⁵⁴) common position on the approach to appropriate remedies in the electronic communications networks and services regulatory framework and its common position on the best practice in remedies for the wholesale leased lines markets⁶⁵⁵;

⁶⁵² Pursuant to Regulation 13(2) of the Access Regulations.

⁶⁵³ Pursuant to Regulation 13(3) of the Access Regulations.

⁶⁵⁴ Pursuant to [Regulation \(EC\) No 1211/2009 of the European Parliament and the Council of 25 November 2009 establishing the Body of European Regulators for Electronic Communications \(BEREC\) and the Office](#) ERG was replaced with the Body of European Regulators for Electronic Communications (BEREC) in 2010.

⁶⁵⁵ BEREC Common Position on best practice in remedies imposed as a consequence of a position of significant market power in the relevant markets for wholesale leased lines, Document BOR(12) 126 published 26 November 2012, available at:

- (b) the comments letters issued by the European Commission pursuant to Articles 7 and 7a of the Framework Directive in its review of regulatory measures notified by Member States under the EU consultation mechanism for electronic communications service; and
- (c) the European Commission's 2005 Accounting Separation and Cost Accounting Recommendation⁶⁵⁶.

9.3 Existing Remedies

9.12 Before considering which remedies would best meet ComReg's statutory/regulatory objectives in the Zone B MI WHQA Market, it is worth highlighting the existing remedies that are in place with respect to Eircom's provision of LLs arising from the obligations imposed in the 2008 Decision and subsequently in other relevant decisions.

9.3.1 Existing Access Remedies

9.13 Eircom is currently subject to a range of access obligations having been designated with SMP in the wholesale terminating segment leased line market as described in Section 8 of the 2008 Decision. These remedies were designed to address various competition problems that were identified at that time. The obligations imposed under the 2008 Decision and subsequent decisions require Eircom to, amongst other things, provide:

- (a) Legacy Ethernet Services⁶⁵⁷ such as Wholesale Ethernet Access ('**WEA**'), Wholesale Dublin Ethernet Access ('**WDEA**'), and Wholesale Regional Ethernet Access ('**WREA**');

http://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/common_approaches_positions/1096-revised-berec-common-position-on-best-practices-in-remedies-as-a-consequence-of-a-smp-position-in-the-relevant-markets-for-wholesale-leased-lines.

⁶⁵⁶ European Commission Recommendation of 19 September 2005 on accounting separation and cost accounting systems under the regulatory framework for electronic communications (2005/698/EC) the '**2009 Termination Rates Recommendation**').

⁶⁵⁷ Ibid.

- (b) NGN Ethernet Services⁶⁵⁸ including Wholesale Symmetrical Ethernet Access ('**WSEA**'), Wholesale Ethernet Service ('**WES**') and Wholesale Ethernet Interconnect Service ('**WEIL**');
- (c) WDM⁶⁵⁹ Services such as the Wholesale Uncontended Product ('**WUP**')⁶⁶⁰ and Local Loop Unbundling Backhaul ('**LLU Backhaul**')⁶⁶¹;
- (d) Wholesale CES (Circuit Emulation Service) ('**WCS**')⁶⁶²; and
- (e) to meet all reasonable requests for access to network elements or associated facilities in the market.

9.14 The 2008 Decision and subsequent decisions also imposed obligations upon Eircom:

- (a) to give third parties access to products, services, network elements or facilities in the market including access to any additional wholesale inputs which are necessary for the provision of end to end LLs to end users;
- (b) to negotiate in good faith with Undertakings requesting access;
- (c) not to withdraw access to facilities already granted without ComReg's prior approval;
- (d) to grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of services or virtual network services;
- (e) to provide access to Operational Support Systems ('**OSS**')⁶⁶³ and similar software systems necessary to ensure fair competition in the provision of services;
- (f) to interconnect with networks or network facilities;

⁶⁵⁸ Ibid.

⁶⁵⁹ Wavelength Division Multiplexing ('**WDM**') is a technology which multiplexes a number of optical carrier signals onto a single optical fibre by using different wavelengths.

⁶⁶⁰ As described in the Openeir documentation which is available at www.openeir.ie

⁶⁶¹ Ibid.

⁶⁶² Ibid.

⁶⁶³ For example, the Eircom 'Unified Gateway'.

- (g) to comply with a set of KPIs which were further refined in the 2011 KPI Decision⁶⁶⁴; and
 - (h) to invoice other authorised operators on a monthly basis, one month in advance of provision of the service with the credit terms remaining at 30 calendar days, as specified in the 2011 Access and Transparency Decision⁶⁶⁵.
- 9.15 ComReg also imposed the following conditions with respect to the access obligations:
- (a) to conclude legally binding and fit for purpose Service Level Agreements ('**SLAs**'⁶⁶⁶) with Other Authorised Operators ('**OAOs**');
 - (b) to negotiate in good faith with OAOs in relation to the conclusion of legally binding SLAs;
 - (c) to ensure that SLAs include provisions for service credits⁶⁶⁷ arising from a breach of the SLA;
 - (d) to update and publish the industry SLA as required; and
 - (e) to provide to ComReg and publish on a monthly basis, performance statistics as specified by ComReg.
- 9.16 The list of Urban Centres (originally 15 Urban Centres were listed in Annex A of the 2008 Decision), which related to the definition of the market for the trunk segment of wholesale LLs, was amended and increased to 16 and later to 20 Urban Centres, under the 2010 Urban Centres Decision and the 2013 Urban Centres Decision respectively.

⁶⁶⁴ See "Introduction of Key Performance Indicators for Regulated Markets", Response to Consultation and Decision, ComReg Document No 11/45, Decision D05/11, June 2011 (the '**2011 KPI Decision**').

⁶⁶⁵ ComReg Document 11/22, Decision D02/11, Amendments to the transparency obligation and the access obligation in the market for wholesale terminating segments of leased lines, ComReg Document No.11/22 published 22 March 2011 ('**2011 Access and Transparency Decision**').

⁶⁶⁶ An SLA is essentially a legally binding contract in relation to the service levels that Eircom would commit to when supplying Wholesale MI LLs to Access Seekers, as more particularly set out in Eircom's LLRO, as may be amended from time to time.

⁶⁶⁷ A service credit is a financial credit which is provided by Eircom to an Access Seeker where Eircom has failed to meet the service levels which Eircom commits to from time to time in its SLA.

9.3.2 Existing Non-Discrimination Remedies

9.17 Eircom is also subject to non-discrimination obligations under the 2008 Decision. These include requirements on Eircom to:

- (a) apply equivalent conditions in equivalent circumstances to other Undertakings providing equivalent services;
- (b) provide services and information to OAOs under the same conditions, according to the same timescales, on the same basis and quality, as Eircom provides for its own services or those of its subsidiaries or partners; and
- (c) provide to OAOs information which is required to support existing and future products, services and associated facilities in an accurate and timely manner.

9.3.3 Existing Transparency Remedies

9.18 The 2008 Decision also subjected Eircom to a range of transparency obligations whereby it is required to make certain information available in relation to interconnection and access. These include specific obligations on Eircom to:

- (a) publish on its wholesale website, and keep updated, a Reference Offer ('**RO**'), which shall include a description of the relevant offerings broken down into component parts and a description of the associated terms and conditions, including prices;
- (b) ensure that its RO is sufficiently unbundled so that Undertakings are not required to pay for facilities which are not necessary for the service requested;
- (c) publish at least three months in advance any proposed changes to the RO and any proposed changes to wholesale prices and the application of such prices. Furthermore, Eircom is required to notify ComReg five working days in advance of any such publication as the prior approval of ComReg is necessary before the implementation of any such changes.
- (d) publish information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices;
- (e) publish all SLAs concluded and/or amended and publish a standard industry SLA on its wholesale website;
- (f) publish KPIs to demonstrate that a product is continually fit for purpose; and
- (g) provide information which is required to support existing and future products in an accurate and timely manner to OAOs.

- 9.19 The 2011 KPI Decision required Eircom to publish on a publicly available website a set of KPIs across a range of products including the Wholesale and Retail Leased Lines Markets.
- 9.20 The 2011 Access and Transparency Decision, further amended the transparency obligations that existed under the 2008 Decision, removing the obligation to publish pricing information for WLLs (Eircom Wholesale LL product) of bandwidths greater than 10Mb/s.

9.3.4 Existing Price Control and Cost Accounting Remedies

Current Pricing Methodology

9.21 ComReg imposed cost orientation on partial private circuit products, and related ancillary services in the 2008 Decision and more recently in the 2012 Pricing Decision⁶⁶⁸, which extended the cost orientation obligation to MI NGN Ethernet terminating segments encompassing WSEA Physical and Logical Circuit product components, including ancillary services required to support the deployment of MI NGN Ethernet terminating segments. This was based on the fact that Eircom had SMP in the wholesale market for terminating segment of leased lines and given ComReg's position that Eircom had the ability and incentive to price excessively. The cost orientation obligation was based on the determination of wholesale tariffs for terminating segments using a Bottom Up ('BU') Long Run Average Incremental Cost ('LRAIC') plus cost model⁶⁶⁹. The BU-LRAIC plus approach was used as the general basis for determining charges in the market for wholesale terminating segment of leased lines. This approach was reflective of the prices that would prevail in a competitive market and therefore, should send the right "build/buy" signals to new entrants. This methodology included the average efficiently incurred variable and fixed costs that were directly attributable to the activity concerned, plus an appropriate apportionment of joint and common costs, which are faced by any operator when deciding to enter a market or to expand. For the ancillary products/services, Eircom are obliged to comply with the cost orientation obligation, from the 2008 Decision and ensure that wholesale tariffs are cost oriented and that it only recovers efficiently incurred costs and a regulated rate of return.

⁶⁶⁸ [ComReg Document No 12/03](#), Decision D02/12 'Response to Consultation Document No. 10/70 and 11/32 A final decision further specifying the price control obligation in the market for wholesale terminating segments of leased lines ('**2012 Pricing Decision**').

⁶⁶⁹ This is the methodology used to estimate the "LRAIC plus" of an efficient operator which is derived from an economic and / or engineering model of an efficient network. The LRAIC plus costs are the average efficiently incurred directly attributable variable and fixed costs, including an apportionment of joint and common costs.

- 9.22 The pricing approach for NGN Ethernet services (broadly comparative to MI leased lines in this Further Consultation) was based on a national de-averaged pricing approach. This reflected variations in costs across regional types where high density demands resulted in lower costs due to economies of scale, and marginally higher costs in regions where demand levels were medium to low in scale and so reflected diseconomies, in the provision NGN Ethernet services.
- 9.23 ComReg imposed cost oriented prices for three principle wholesale components which underpin the delivery of NGN Ethernet terminating segments:
- (a) WSEA Physical, predominantly the fibre cable connectivity from the end user location up to and including the service port at the Eircom telephone Exchange⁶⁷⁰, based on a BU-LRAIC+ cost model, detailed in the 2012 Pricing Decision.
 - (b) WSEA Logical path or core network traversal costs linked to bandwidth, quality of service and locations connected. Again costs were based on BU-LRAIC+ cost model known as the Core Network NGN cost model (also detailed in ComReg Document 11/32⁶⁷¹ and the 2012 Pricing Decision).
 - (c) WEILs, which generally take four forms, i.e. Customer Sited Handover ('CSH'), In Span Handover ('ISH'), In Building Handover ('IBH') and Edge Node Handover ('ENH') are also to have cost orientated tariffs pursuant to the 2012 Pricing Decision.
- 9.24 CSH provides a dedicated fibre access between the Service Providers designated Aggregation Node and the Access Seeker's network. This service is terminated at an access point located on the Access Seeker's premises.
- 9.25 ISH involves providing a dedicated fibre access between the Access Seeker's designated Aggregation Node and the Access Seeker's network located at a cable chamber close to the Service Providers' designated Aggregation Node. The ISH option utilises less of the fibre access network than CSH.

⁶⁷⁰ "Exchange" means an Eircom network premises or equivalent facility used to house network and associated equipment and includes an Aggregation Node or WDM Node. The Exchange sometimes, but not always, houses the Metropolitan Point of Presence (MPoP);

⁶⁷¹ ComReg document 11/32 'Response to Consultation Document No. 10/70 and a further consultation and draft decision on the price control obligation in the market for wholesale terminating segments of leased lines'.

- 9.26 IBH involves providing a dedicated fibre across the floor from the Service Providers' designated Aggregation Node or Eircom Exchange premises to the Access Seeker's co-located footprint in the Eircom Aggregation Node location.
- 9.27 Finally, ENH is delivered where the point of handover is between the Service Providers' designated edge node and the Access Seeker's network. The current ENH product is mainly delivered based on circuit speeds of 10Gb/s and delivered as a CSH. Due to the design of Eircom's NGN core network, the ENH product effectively involves building a dedicated Aggregation Node on the Access Seeker's premises. Building a dedicated Aggregation Node on an Access Seeker's premises involves significant associated equipment costs.
- 9.28 In addition to the above, in its 2012 Pricing Decision, ComReg imposed a Margin Squeeze Test ('**MST**'). This was designed to protect and encourage efficient investment in leased line infrastructure and ensure sustainable competition. ComReg believed that a price floor was also required for wholesale leased lines (which are end to end leased lines connecting two End-User locations).

9.29 The MST was designed to safeguard and encourage appropriate investments by Access Seeker's. ComReg recognised that Eircom's relative pricing of its end-to-end WLL products could have a significant impact on Access Seekers who combine elements of their own network infrastructure with terminating segments purchased from Eircom. As Eircom could change prices from time to time, it could effectively undermine the regulatory process through applying an insufficient economic space vis-à-vis the price of its wholesale end to end leased line product, relative to the prices for leased line terminating segments. The wholesale end-to-end leased line tariff, in conjunction with retail costs could then form the basis for a discounted retail product offering. If this scenario was not addressed through such a remedy, an Access Seeker who invests in its own network to bridge the connectivity between two terminating segments, in order to replicate a retail end-to-end offering, will be unable to match the end-to-end leased line product price and recover its combined wholesale and retail costs. This in turn, would discourage investment by an OAO in its own infrastructure. The MST was based on the Similarly Efficient Operator ('**SEO**') approach, which is largely based on Eircom's cost information but adjusted to reflect the fact that Access Seekers did not currently enjoy the same economies of scale as Eircom. Eircom, mainly, as a result of its relative scale carries much greater volumes of traffic than its main competitors and therefore has a much lower unit cost nationally. This approach takes account of the insufficient competitive development of the market for wholesale terminating segments of leased lines and in particular the ability of infrastructure-based Access Seekers to compete with Eircom in the provision of end-to-end services. The rationale for and design of the MST was to encourage efficient infrastructure investment and encourage Access Seekers to climb the ladder of investment, in line with ComReg's objectives.

9.30 ComReg also imposed an annual review of Eircom's retail sales of MI LL products in its 2012 Pricing Decision, to assess if the revenues realised were sufficient to ensure that a margin squeeze was not occurring. The initial step was to take a sample of successful retail tenders realised by Eircom in the preceding year that reflected a fair weighting of the retail services sold. Based on the technical characteristics of the service required (bandwidth, quality of service, etc.) and locations from which connectivity had to be addressed. The test involved determining the tariffs for the wholesale terminating segments required at each end of a leased line product path between two end user points, required to emulate the retail service, in conjunction with a contribution to interconnect facilities to transition each terminating segment path onto a competing Access Seeker network, with the final addition of the costs for the use of an SEO Access Seeker network to bridge the two interconnection points to attain full end-to-end connectivity. This then provided the wholesale cost base faced by an Access Seeker, which then would require a retail margin to address its own retail costs including marketing and sales, etc. This review assured ComReg that the retail prices tendered by Eircom were sufficient to address such costs and that no margin squeeze is found to have occurred during the control period outlined in the 2012 Pricing Decision.

9.3.5 Existing Accounting Separation Remedies

9.31 In the 2008 Decision ComReg specified that Eircom was subject to the then relevant accounting separation decisions which were existing at the time of publication. These decisions have been revised and updated in the 2010 Accounting Separation Decision⁶⁷².

9.32 The existing Accounting separation remedies were detailed in ComReg's 2008 Decision, wherein ComReg specified that Eircom was subject to relevant accounting separation obligations. These obligations have since been revised and updated by the 2010 Accounting Separation Decision. In addition, the obligation to retain Accounting Separation remedies for terminating segments in the leased line market, was re-iterated in the 2012 Pricing Decision.

⁶⁷² See "[Accounting Separation and the Cost Accounting Review of Eircom Limited, ComReg Document 10/67, Decision D08/10](#)", dated August 2010 ('**2010 Accounting Separation Decision**').

9.33 Eircom publishes its Accounting Separation results in order to comply with its current requirement to publish the financial results for the Wholesale Leased Line Market, via an Income Statement and Statement of Mean Capital Employed for each financial year. Additionally, ComReg has directed Eircom to provide on an annual basis Additional Financial Statements detailing the financial results in a form which segments the Income Statement and the Statement of Mean Capital Employed between Partial Private Circuits ('PPCs'), Wholesale Leased Lines ('WLL') and Next Generation Network ('NGN') Ethernet products in the wholesale terminating segment of leased lines. ComReg, also in the context of the 2008 Decision, required Eircom to further separate financial results for PPC and WLL products based on the bandwidth threshold of 155Mb/s, being a key differentiator in the segmentation of Traditional Interface ('TI') services provided into the Trunk and Terminating segments of the leased line market. The resulting financial reports allows ComReg to monitor the returns realised in the MI WHQA market, but also in the remaining regulated elements of the wholesale TI LL markets.

9.4 Assessment of Regulatory Approaches to Imposing Remedies in the Zone B MI WHQA Market

9.34 In Section 5, ComReg has set out its preliminary view that Eircom has SMP in the Zone B MI WHQA Market. Furthermore, in Section 8, ComReg identified a range of potential competition problems that may arise in this market, absent regulation, arising from Eircom's ability and incentives as a vertically integrated Undertaking with SMP in the Zone B MI WHQA Market that competes with Access Seekers in both the retail and wholesale LL markets (and related markets). In this Section, ComReg assesses the regulatory options for addressing the competition problems that have been identified, before then proposing specific regulatory obligations.

9.4.1 Option of 'No Regulation' in Zone B of the MI WHQA Market

9.35 ComReg has considered whether the option of de-regulation or regulatory forbearance is appropriate in the Zone B MI WHQA Market.

9.36 As noted in paragraph 9.7 above, Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations require ComReg to impose at least some level of regulation on Undertakings designated as having SMP. In Section 5 ComReg set out its view that the Zone B MI WHQA Market is not effectively competitive (and is not likely to become effectively competitive within the timeframe covered by this review). Section 8 identified a range of competition problems that could occur in the Zone B MI WHQA Market and related markets, absent regulation.

- 9.37 In view of this assessment, it is ComReg's preliminary view that the Zone B MI WHQA Market (and downstream markets) would be unlikely to function effectively absent regulation. This would not be in the interest of promoting sustainable competition. ComReg has set out its preliminary view that Eircom has the ability and incentive to exclude or foreclose Access Seekers competing in the provision of wholesale and/or retail MI LLs (and related services) by refusing to supply them with its MI WHQA products, services and facilities in Zone B (including constructive refusal), or by setting prices at an excessive level.⁶⁷³
- 9.38 It is ComReg's preliminary view that the option of regulatory forbearance in the Zone B MI WHQA Market is not, therefore, appropriate or justified. The relevant issue to be considered, therefore, relates to what form of regulation is appropriate. In particular, which of the remedies identified in paragraph 9.7 above are appropriate having regard to the particular circumstances of the Zone B MI WHQA Market, the associated competition problems and taking account of the relevant statutory requirements to which ComReg must have regard to when imposing remedies. ComReg sets out its preliminary views on these issues below.

9.4.2 Option to impose remedies in the Zone B MI WHQA Market

- 9.39 As noted in paragraphs 9.13 to 9.31 Eircom has to date been subject to a range of SMP based regulatory obligations as imposed primarily in 2008 Decision and subsequent decisions. These obligations require Eircom to provide Access Seekers with wholesale access to MI LLs (and related services and facilities) and to do so on non-discriminatory and transparent terms and conditions, including at regulated prices.
- 9.40 ComReg sets out below its preliminary views on the detail of the imposition of regulatory obligations on Eircom in the Zone B MI WHQA Market.

9.5 Proposed Remedies in the Zone B MI WHQA Market

- 9.41 In the paragraphs below ComReg sets out its preliminary views regarding the remedies that it proposes to impose upon Eircom in the Zone B MI WHQA Market. These include:
- (a) Access obligations (discussed in paragraphs 9.42 to 9.204);

⁶⁷³ See Section 8 above.

- (b) Non-discrimination obligations (discussed in paragraphs 9.205 to 9.222);
- (c) Transparency obligations (discussed in paragraphs 9.223 to 9.306);
- (d) Price Control Remedies in the Zone B MI WHQA Market (discussed in paragraphs 9.307 to 9.389);
- (e) Accounting Separation and Cost Accounting Remedies (discussed in paragraphs 9.392 to 9.398); and
- (f) Requirements regarding a Statement of Compliance with the above obligations (discussed in paragraphs 9.399 to 9.449 below).

9.5.1 Access Remedies

Overview

9.42 As identified in Sections 4 and 5, in providing retail and/or wholesale LLs (and related services) in the Zone B MI WHQA Market, a number of service providers are largely dependent upon the use of Eircom's wholesale services due to its largely non-replicable ubiquitous⁶⁷⁴ national network. ComReg has already set out its view that Eircom has the ability and incentive to refuse to supply wholesale MI WHQA products, services and facilities in Zone B to Access Seekers, either actually or constructively, or to provide these services on discriminatory or unreasonable terms and conditions (including in relation to price) and that this would likely hinder competition in the market and related markets. This would ultimately be detrimental to the interests of End Users, and would be contrary to the objectives set out in Section 12 of the Communications Regulation Acts 2002 (as amended) and Regulation 16 of the Framework Regulations.

9.43 ComReg's preliminary view is that there are likely to continue to be differences in bargaining power⁶⁷⁵ between Eircom and Access Seekers, particularly given the absence of sufficiently credible alternative sources of supply within the timeframe of this review period.

⁶⁷⁴ In terms of duct and pole infrastructure.

⁶⁷⁵ ComReg considered the impact of CBP in Section 5 and considered it to be ineffective.

- 9.44 Absent the presence of effective access remedies, ComReg would be left to address any such refusal by Eircom to supply wholesale MI WHQA⁶⁷⁶ - either through its general dispute resolution or compliance functions - all of which would occur after the fact, take time⁶⁷⁷ to resolve, be specific to the bilateral circumstances between the relevant parties and not, thereby, contributing to regulatory certainty amongst market players. As a consequence, this could be damaging to downstream competition and ultimately consumers.
- 9.45 Such case-by-case interventions by ComReg would also be inefficient and ineffective in resolving the broader competition problem of denial/delayed access by an SMP operator. In this regard, it is worth noting that the European Commission has made several comments⁶⁷⁸, under Article 7/7a of the Framework Directive, on the imposition by NRAs of SMP-type obligations pursuant to the exercise of dispute resolution functions. Such European Commission decisions clearly highlight the need for effective remedies to be imposed through a formal market analysis process. This includes the imposition of access (and other) obligations on any operators found to have SMP.
- 9.46 Additionally, ComReg could seek to use its ex post competition law powers. However, such powers could ultimately result in a finding by an Irish court that an Undertaking has abused its dominant position, but not necessarily require access to be provided as an outcome to any such finding. Similar to the reasons above, a competition law approach would also take significant time to resolve, be specific to the relevant circumstances of the case and not contribute to regulatory certainty amongst market players.
- 9.47 Overall, therefore, ComReg considers that dispute resolution (which can be of relevance in resolving access and other issues in certain circumstances) and ex post competition law approaches would not be effective in resolving issues concerning denial of access in the Zone B MI WHQA Market.

⁶⁷⁶ This includes MI WHQA products, services and facilities.

⁶⁷⁷ Including time for ComReg to consider the dispute, along with possible public consultation and notification to the European Commission.

⁶⁷⁸ See European Commission serious doubts/comments and [BEREC Opinions](#) (where made) on Polish cases [PL/2010/1127](#), [PL/2011/1273](#), [PL/2011/1255-1258](#) and Latvian case [LV/2012/1296](#).

- 9.48 Regulation 12(1) of the Access Regulations provides that ComReg may, in accordance with Regulation 8 of the Access Regulations, impose on an operator obligations to meet reasonable requests for access to, and use of, specific network elements and associated facilities where ComReg considers that the denial of such access, or the imposition by operators of unreasonable terms and conditions having a similar effect, would:
- (a) hinder the emergence of a sustainable competitive retail market;
 - (b) not be in the interests of End Users; or
 - (c) otherwise hinder the objectives set out in Section 12 of the Communications Regulation Acts 2002 (as amended) and Regulation 16 of the Framework Regulations.
- 9.49 Obligations must also be proportionate and justified in the light of the objectives laid down in Section 12 of the Communication Regulation Act 2002 and Regulation 16 of the Framework Regulations.
- 9.50 Regulation 12(2)(a) to 12(2)(j) and Regulation 12(3) of the Access Regulations provide that ComReg can impose, where appropriate, additional access obligations and may attach conditions covering fairness, reasonableness and timeliness in relation to those access obligations.
- 9.51 As noted above, pursuant to Regulation 12(4) of the Access Regulations, when considering whether to impose obligations referred to in paragraphs (1) and (2) of Regulation 12 and, in particular, when assessing whether such obligations would be proportionate to the objectives set out in Section 12 of the Communications Regulation Acts 2002 (as amended), ComReg has to take the following factors into account:
- (a) the technical and economic viability of using or installing competing facilities, in light of the rate of market development, taking into account the nature and type of interconnection and access involved;
 - (b) the feasibility of providing the access proposed, in relation to the capacity available;
 - (c) the initial investment by the facility owner, bearing in mind the risks involved in making the investment;
 - (d) the need to safeguard competition in the long-term;
 - (e) where appropriate, any relevant intellectual property rights; and
 - (f) the provision of pan-European services.

9.52 The relevant provisions are taken into account below in ComReg's consideration of the access remedies that ComReg proposes to impose upon Eircom in order to address the competition problems identified in Section 8. An overview of Eircom's existing access obligations has also been provided in paragraphs 9.13 to 9.16 above.

Consideration of statutory criteria on proposed access obligations

9.53 In paragraphs 9.8 and 9.11 above, ComReg set out a range of statutory criteria that ComReg must consider when imposing access obligations. These criteria are considered below having regard to the proposed access obligations set out in paragraphs 9.57 to 9.132 below.

- (a) **Technical and economic viability of using or installing competing facilities:** In Sections 4 and 5, ComReg defined the Zone B MI WHQA Market and has set out its preliminary view that existing competition, potential competition and CBP are unlikely to result in effective competition within such a market. In light of this, using or installing competing facilities to provide MI WHQA products, services and facilities in Zone B is not likely to be economically feasible within the period of this review. This is evidenced by the lack of meaningful independent entry into the Zone B MI WHQA Market since the 2008 Decision and Eircom's high and persistent market share. On a forward looking basis, ComReg does not consider that barriers to entry may sufficiently be eroded over time. However ComReg does not consider it likely that any market entry will materially alter the competitive position within the Zone B MI WHQA Market within the period of this review. Eircom has to date been providing MI WHQA products, services and facilities in Zone B and it is, therefore, technically viable to do so for the period of the review.
- (b) **Feasibility of providing access in relation to capacity available:** Access to MI WHQA products, services and facilities in Zone B are currently provided by Eircom, albeit on foot of existing regulatory obligations. On a forward-looking basis, ComReg is not aware that there would be any material capacity constraints that would give rise to Eircom facing difficulties in meeting the proposed access obligations.

- (c) **The need to safeguard competition:** In Section 8 and throughout this Section, ComReg has highlighted the impact on downstream competition and the impacts on End Users that could arise given Eircom's ability and incentives to potentially engage in exploitative or exclusionary behaviours in the Zone B MI WHQA Market and related markets (absent regulation). These include, inter alia, actual or constructive denial of access, excessive pricing and other behaviours which could damage the development of sustainable competition in the Zone B MI WHQA Market. ComReg considers that imposing access (and other obligations) in the Zone B MI WHQA Market will ultimately promote competition in the retail Zone B MI WHQA market, to the benefit of consumers.
- (d) ComReg considers that Interconnection⁶⁷⁹ at the Zone A WHQA Market is necessary in order that Access Seekers gain access to the Zone B market and will ultimately promote competition in the wholesale Zone B MI WHQA market, to the benefit of consumers.
- (e) **Intellectual property rights:** ComReg's preliminary view is that intellectual property rights are not likely to be a significant concern in the context of the provision of access to MI WHQA products, services and facilities in Zone B .
- (f) **Pan European Services:** ComReg's preliminary view is that its proposed approach should facilitate the provision of pan-European services since the proposed approach is consistent with the policies of the European Commission and other NRAs. Consistent regulation of MI WHQA across the EU will help to support a seamless provision of pan-European services by allowing SPs in other Member States to provide electronic communications services in Ireland.

9.54 In view of the above, ComReg's preliminary view is that the proposed obligations requiring Eircom to provide access to products, services and associated facilities, in the Zone B MI WHQA Market are proportionate and justified.

⁶⁷⁹ "Interconnection" shall have the same meaning as under Regulation 2 of the Access Regulations as may be amended from time to time, and for the purposes of this Decision Instrument includes, but is not limited to, the Eircom WEIL (Wholesale Ethernet Interconnect Link) service.

9.55 ComReg has also considered whether access obligations would be sufficient in themselves to resolve the identified competition problems. For the reasons set out in the discussion of the other proposed remedies below, ComReg does not consider this to be the case. For example, the imposition of access obligations alone would not resolve issues such as excessive pricing, discrimination on price or quality grounds, or ensure transparency of terms and conditions of access.

Proposed Access Remedies

9.56 Below, ComReg sets out its proposed access Remedies including:

- (a) a requirement to meet reasonable requests for Access to MI WHQA products, services and facilities in Zone B (discussed in paragraphs 9.57 to 9.64 below);
- (b) a requirement to provide access to Interconnection Services (discussed in paragraphs 9.65 to 9.80 below);
- (c) a requirement to provide access to Co-location, and Co-location resource sharing (discussed in paragraphs 9.81 to 9.110 below);
- (d) a requirement to negotiate in good faith (discussed in paragraphs 9.111 to 9.118 below);
- (e) a requirement not to withdraw access to facilities already granted (discussed in paragraphs 9.119 to 9.125 below);
- (f) a requirement to grant open access to technical interfaces, protocols and other key technologies (discussed in paragraphs 9.126 to 9.128 below);
- (g) a requirement to provide access to Eircom's OSS (discussed in paragraphs 9.129 to 9.132 below); and
- (h) requirements governing fairness, reasonableness and timeliness of access (discussed in paragraphs 9.133 to 9.202 below);

Requirement to meet Reasonable Requests for Access to MI WHQA products, services and facilities in Zone B

9.57 ComReg's preliminary view is that, pursuant to Regulation 12(1) of the Access Regulations that Eircom should be required to meet all reasonable requests from Undertakings for the provision of access to MI WHQA products, services and associated facilities in Zone B.

9.58 ComReg considers it necessary to impose a range of access obligations upon Eircom that are ultimately intended to facilitate the development of sustainable competition in downstream market and maintain competition in the Zone B MI WHQA Market.

- 9.59 The significant majority of the access obligations that ComReg proposes to impose here, and elsewhere in this Section, effectively results in a continuation of Eircom's offer of the existing Wholesale MI WHQA products. The proposed obligations are in accordance with the product descriptions and terms and conditions of supply or use, as specified in the current version of the Eircom's LLRO, in accordance with the proposed obligations discussed elsewhere in this Consultation. However, ComReg has also proposed refinements to some such existing obligations, as well as new obligations.
- 9.60 ComReg considers it necessary to impose a range of access obligations upon Eircom which are ultimately intended to facilitate sustainable competition in downstream markets.
- 9.61 An overview of existing access obligations is set out in paragraphs 9.13 to 9.16 above.
- 9.62 As noted in Section 5, ComReg does not consider that existing or potential competition would effectively constrain Eircom's market power within the lifetime of this market review. In particular, ComReg has noted that competition has and, for the period of this review, is likely to continue to be heavily dependent on availability of wholesale access to MI WHQA products, services and facilities in Zone B. In this respect, access to these elements is necessary to maintain competition and to minimise foreclosure concerns that could arise, absent such regulation.

Additional Proposed Access Remedies

- 9.63 In addition to the general obligation to meet reasonable requests for access above, ComReg proposes to impose specific access obligations upon pursuant to Regulation 12(1) of the Access Regulations that Eircom in the Zone B MI WHQA Market in order to address the potential competition problems identified in Section 8.
- 9.64 ComReg therefore proposes to impose the following access obligations upon Eircom in order to address identified competition problems and ultimately to promote the development of competition to the benefit of the End Users:
- (a) Obligations to provide access to NGN Ethernet services which consist of:
 - (i) Wholesale Symmetrical Ethernet Access ('**WSEA(s)**') Physical and Logical circuits at a location (Exchange or End User premises) situated in Zone B.

- (ii) NGN Ethernet Interconnection services⁶⁸⁰ (discussed in paragraphs 9.65 to 9.74 below), in particular, Wholesale Ethernet Interconnection Links ('**WEILs**'), including In-Building Handover ('**IBH**')⁶⁸¹, In-Span Handover ('**ISH**')⁶⁸², Customer-Sited Handover ('**CSH**')⁶⁸³ and Edge Node Handover ('**ENH**')⁶⁸⁴ variants (discussed in paragraphs 9.65 to 9.74 below); which in turn may require access to:
 - a) Co-location, Co-location Resource Sharing, Co-location Rack Interconnection and Shared Services within or between Co-location Racks (discussed in paragraphs 9.81 to 9.110 below);
 - b) Interconnection Sharing Service (discussed in paragraphs 9.75 to 9.80 below); and
- (b) to provide access to Interconnection based WDM "Uncontended" bandwidth services⁶⁸⁵ (discussed in paragraphs 9.65 to 9.74 below), , which consist of:
 - (i) a WDM access connection to either a customer premises (CSH) or to a Co-location facility in an Eircom exchange (IBH), situated in Zone B; and
 - (ii) WDM Interconnection Services (CSH or ISH); and which, in turn, may require access to:
 - a) Co-location, Co-location Resource Sharing, Co-location Rack Interconnection and Shared Services within or between Co-location Racks (discussed in paragraphs 9.81 to 9.110 below);

Requirement to provide access to Interconnection Services

9.65 Pursuant to Regulation 12(2)(a) of the Access Regulations, ComReg proposes that Eircom should be required to provide access to:

⁶⁸⁰ Interconnection Services are categorised by four handoff types namely: ISH, CSH, IBH and ENH.

⁶⁸¹ In-building handover or IBH means the connection from the Eircom network to the Access Seeker's equipment within the Exchange, or equivalent facility.

⁶⁸² In-Span Handover or ISH means the connection between the Exchange and the Access Seeker's nominated Point of Handover.

⁶⁸³ Customer Sited Handover or CSH means the connection from the Eircom network to the Access Seeker's equipment in the Access Seeker's premises, which includes the installation of an Eircom NTU at the Access Seeker's premises.

⁶⁸⁴ Edge Node Handover or ENH means the connection from the Eircom network through a dedicated aggregation node interface to the Access Seeker's equipment.

⁶⁸⁵ These are intended to replace the current services refer to as "end-to-end" Wholesale Uncontended Product ('**WUP**') and LLU Backhaul.

- (a) Interconnection Services (including Co-location for Interconnection, Associated Facilities and services); and
- (b) Provide access to Interconnection Sharing.

9.66 The justification for the above proposed requirements are discussed below in paragraphs 9.67 to 9.74 below.

Interconnection Services

9.67 Interconnection Services and facilities are the physical and/or logical connectivity between networks to enable the handover of traffic between Undertakings' networks at the PoH⁶⁸⁶. Eircom currently provides Interconnection Services in the MI WHQA Market and related markets using the WEIL product set.

9.68 Interconnection is needed to connect the Access Seekers' networks with Eircom's network. Without Interconnection, competition in the relevant market and downstream markets would be restricted to resale of services⁶⁸⁷ which limits scope for product differentiation and innovation by Access Seekers, thereby undermining consumer choice and competition in the market. Eircom currently supplies the following range of interconnection services (together referred to as **'Interconnection Services'**):

- (a) ISH - the connection between the Exchange and the Undertaking's nominated PoH;
- (b) CSH - the connection from the Eircom network to the Undertaking's equipment in the Undertaking's premises, which includes the installation of an Eircom NTU⁶⁸⁸ at the Undertaking's premises;
- (c) IBH - the connection from the Eircom network to the Undertaking's equipment within the Exchange, or equivalent facility; and
- (d) ENH - the connection from the Eircom network through a dedicated Aggregation Node interface to the Undertaking's equipment

⁶⁸⁶ PoH or Point of Handover means the physical point at which two networks are interconnected to allow traffic to pass between these networks.

⁶⁸⁷ Access Seekers would be restricted to reselling end to end services.

⁶⁸⁸ "Network Termination Unit" or "NTU" means the physical interface which provides the service demarcation or Point of Handover of the wholesale service within the customer premises;

- 9.69 Access to Interconnection Services supports the purchase of access products that are essential for Access Seekers to be able to provide Electronic Communications Services ('ECS') and Electronic Communications Networks ('ECN') services. A range of different types of Interconnection Services are required to ensure effective competition in the Zone B MI WHQA Market and related downstream markets by facilitating product innovation and differentiation.
- 9.70 The imposition of this obligation relating to access to various types of Interconnection Services recognises the differing degrees of infrastructure deployment by Access Seekers in the Zone B MI WHQA Market (and more broadly within the wider MI WHQA Market). For example, not all Access Seekers have sufficient infrastructure of their own that is close enough to Eircom's network, in order to be able to economically or commercially avail of Eircom's IBH or ISH services.
- 9.71 For example, if CSH was the only Interconnection handoff type available, then larger scale Access Seekers would not be in a position to efficiently use their own infrastructure and could reduce Access Seekers' incentives for network investment thereby limiting sustainable competition in the longer term. Therefore, requiring access to the full suite of Interconnection Services is necessary to ensure that there is sufficient flexibility given that Access Seekers will have invested in building out network infrastructure to varying degrees (e.g. Co-location, In-span chambers, ENH Nodes).
- 9.72 The availability of Interconnection is one of the fundamental concepts that underpins the ladder of investment and infrastructure based competition. As Access Seekers build-out their own network and climb the ladder of investment, points of handover are required deeper into Eircom's network. This allows for increased efficiencies and lower costs for Access Seekers who can avail of more cost effective Interconnection Services deeper in the network.
- 9.73 ComReg's further preliminary view is that Eircom, as a vertically integrated Undertaking with SMP in the Zone B MI WHQA Market has the ability and incentive to refuse access to Interconnection Services. In this respect, access to Interconnection Services and the associated Co-location facilities are necessary to ensure the development of sustainable and effective MI WHQA and downstream competition and to minimise foreclosure concerns that could arise, absent such regulation.

- 9.74 In assessing the proportionality of this proposed obligation, ComReg considers that Interconnection Services are essential and that no technically feasible alternatives were identified that would effectively meet the aims of promoting long term sustainable competition to the benefit of End Users.

Interconnection Sharing

- 9.75 Interconnection Sharing provides an Access Seeker (AS-1) with the opportunity to share a WEIL which is owned by another Access Seeker (AS-2) – in circumstances where AS-2 agrees commercially to allow AS-1 share its WEIL.
- 9.76 Interconnection Sharing is a derivative of the Interconnection Service – it cannot exist in its own right. It is less burdensome on Eircom as it minimises the provision/build of new Interconnection Services given that Interconnection Sharing is implemented using Interconnection Services which are already in place.
- 9.77 Some Access Seekers may wish to have exclusive use of their Interconnection Services. Other Access Seekers may wish to share their Interconnections Services especially where their Interconnection capacity greatly exceeds their own requirements (e.g. 10Gbit/s and 100Gbit/s WEILs).
- 9.78 Currently, Eircom offers Interconnection Sharing where two or more Access Seekers are proceeding under one licence agreement⁶⁸⁹ e.g. where AS-1 is 100% owned by AS-2. The implementation is straightforward given that AS-1 owns the access circuit (WSEA) and logical circuit (WES) connecting the access circuit to the WEIL which is owned by AS-2. There is no billing implications given that the WSEA/WES charges are issued on a separate bill to AS-1, while the WEIL charges are issued on another bill to AS-2.
- 9.79 This proposed obligation extends the existing functionality offered by Eircom to any Access Seeker who enters into a commercial agreement with another Access Seeker. ComReg envisage that the development required will be minor in nature - focused on allowing Access Seekers to record a 'white' list⁶⁹⁰ on the UG and amending existing licence agreements.

⁶⁸⁹ All charges relating to Interconnection are invoiced to, and accepted by, AS-2.

⁶⁹⁰ The 'white' list will allow an Access Seeker (AS-2) to permit other Access Seekers listed on this list to share AS-2 Interconnections.

9.80 It is beneficial to an Access Seeker (AS-1) to reach an agreement with another Access Seeker as it enables Access Seeker (AS-1) to compete more effectively by facilitating access to Zone B MI WHQA Market within a reasonable timeline, given that the Interconnection Service is already in place, The Interconnection Sharing service promotes innovation, competition, and ultimately benefit End Users. In ComReg's preliminary view the proposed obligations above is justified and proportionate for the reasons set out above.

Requirement to provide access to Co-location, and Co-location resource sharing

9.81 Pursuant to Regulation 12(1) of the Access Regulations, ComReg proposes that Eircom should be required to provide access to:

- (a) Co-location (discussed in paragraphs 9.83 to 9.91 below);
- (b) Co-location Resource Sharing (discussed in paragraphs 9.92 to 9.99 below);
- (c) Co-location Rack Interconnection (discussed in paragraphs 9.100 to 9.105 below); and
- (d) Shared Services within or between Co-location Racks (discussed in paragraphs 9.106 to 9.110 below).

9.82 The justifications for these proposed requirements are discussed in paragraphs 9.83 to 9.110 below.

Co-location

9.83 Pursuant to Regulation 12(1) of the Access Regulations, Co-location and other associated facilities are necessary to enable and support the provision of IBH MI WHQA products and services.

9.84 Co-location is a wholesale product, which is essential in order for Access Seekers to gain access to IBH Interconnection services which support the broader access obligations requiring Eircom to provide access to MI WHQA services. Co-location services provide serviced space and ancillary services (including both Alternating Current ('AC')⁶⁹¹ and Direct Current ('DC')⁶⁹² power, air-conditioning and tie cables) in an Eircom Exchange building or similar facility.

⁶⁹¹ A.C means Alternating Current.

⁶⁹² D.C means Direct Current.

- 9.85 This serviced space within an Eircom premises is used to accommodate equipment racks which house an Access Seeker's electronic equipment which is required to offer a retail or wholesale product or service offering. The serviced space (i.e. co-located equipment rack) PoH is connected to the MDF/Optical Distribution Frame ('ODF') and to the ('PoH') with these connections providing the complete path from the NTU to the Access Seeker's network.
- 9.86 In Eircom's network, the connection to the PoH for ISH related MI WHQA services is a fibre cable running from the Eircom ODF to a chamber outside the Exchange building (or similar facility) where the Interconnection to the Access Seeker's network is facilitated.
- 9.87 ComReg's further preliminary view is that Eircom, has SMP in the Zone B MI WHQA Market. A Co-location access obligation⁶⁹³ is necessary, because it promotes competition by providing access to essential facilities that enable access to IBH MI WHQA products and services.
- 9.88 The absence of such access would undermine an Access Seeker's ability to avail of WHQA products and services. Access to Co-location products and services is required to ensure the development of sustainable and effective downstream competition and to minimise foreclosure concerns that could arise, absent such regulation.
- 9.89 ComReg considers that this obligation is necessary in this market in order that an Access Seeker can order MI WHQA services (see paragraph 9.204 above).
- 9.90 In assessing the proportionality of the Co-location obligation, ComReg considers that Co-location is necessary and no cost effective viable alternatives were identified that would more effectively meet the aims of promoting long term sustainable competition to the benefit of End Users.
- 9.91 For the reasons set out above, in ComReg's further preliminary view that the proposed Co-location access obligation is justified and proportionate given the aims pursued, namely to promote the development of competition to the ultimate benefit of End Users.

⁶⁹³ Co-location is a generic service identical to that used in the WPNIA (also known as the Wholesale Local Access) Market. A Co-location space can be used for both Market 3A/3B and Market 4 services.

Co-location Resource Sharing

- 9.92 Pursuant to Regulation 12(1) of the Access Regulations, ComReg proposes that Eircom should be required to provide access to Co-location Resource Sharing.
- 9.93 Co-location Resource Sharing provides an Access Seeker (AS-1) with the opportunity to share Co-location which is owned by another Access Seeker (AS-2) – in circumstances where AS-2 agrees commercially to allow AS-1 share its Co-location resources (e.g. space, power, termination equipment etc.).
- 9.94 Co-location Resource Sharing is a derivative of the Co-location service – it cannot exist in its own right. It is less burdensome on Eircom as it minimises the provision/build of new Co-location given that Co-location Resource Sharing is implemented using Co-location are already in place.
- 9.95 Some Access Seekers may wish to have exclusive use of their Co-location services. Other Access Seekers may wish to share their Co-location especially where they have spare Co-location capacity (e.g. space and power).
- 9.96 Given the likelihood of increased demand⁶⁹⁴ for Co-location from Access Seekers will materialise at Trunk Nodes⁶⁹⁵ and Non-Trunk Nodes, the facility for Co-location Resource Sharing, if utilised, will reduce the burden on Eircom to install Co-location where Access Seekers reach commercial agreements. It facilitates the efficient use of Co-Location space which may be scarce in Eircom Exchanges given the likely increase in demand.
- 9.97 An Access Seeker (AS-1) ordering a Zone B MI WHQA IBH service at an Eircom Exchange (e.g. Trunk or Non-Trunk Node) can nominate an existing Co-location rack (owned by another Access Seeker – AS-2) within an Eircom Exchange as the termination point for the service, where AS-1 has entered into a commercial agreement with AS-2.
- 9.98 The key benefit for AS-1 who enters into a commercial agreement to share existing Co-location Resources is the reduction in delivery time for MI WHQA IBH installation given that there is no Co-location construction phase required.

⁶⁹⁴ From Access Seekers who avail of the opportunity to switch to alternative MI WHQA services by installing Interconnections deeper into the network e.g. in Eircom Exchanges (Trunk and Non-Trunk Nodes).

⁶⁹⁵ Especially in Exchanges where PE Nodes are located.

9.99 Absent regulation, ComReg's preliminary view is that Eircom, as a vertically integrated Undertaking with SMP in the Zone B MI WHQA Market, has the ability and incentive to restrict Co-location Resource Sharing. For the reasons set out above, it is ComReg's further preliminary view that the proposed Co-location Resource Sharing access obligation is justified and proportionate given the aims pursued, namely to promote the development of competition to the ultimate benefit of End Users.

Co-location Rack Interconnection

9.100 Pursuant to Regulation 12(1) of the Access Regulations, ComReg is proposing that Eircom should be required to allow Access Seekers to interconnect their co-located equipment in Exchange buildings or similar facilities. This will enable Access Seekers to share services⁶⁹⁶.

9.101 This service is inherent to Co-location Resource Sharing given that Access Seekers sharing the same Co-Location rack are free to interconnect cables between their equipment.

9.102 Access Seekers' equipment racks are normally adjacent to or in close proximity to each other within the Exchange. Moreover, even if this is not the case, Access Seekers equipment can be connected to each other within the Exchange. Access Seekers could route their fibre cables directly between their adjacent equipment racks, or route their fibre cables using cable trays between racks of equipment or by other means, as appropriate.

9.103 Absent regulation, ComReg's further preliminary view is that Eircom as a vertically integrated Undertaking with SMP in the Zone B MI WHQA Market, has the ability and incentive to refuse access to Co-location Rack Interconnection Services and facilities by insisting that it exclusively supply HQA products, services and facilities to Access Seekers. In this respect, access to Co-location Rack Interconnection is necessary to ensure the development of sustainable and effective downstream competition and to minimise foreclosure concerns that could arise, absent such regulation.

⁶⁹⁶ Services such as backhaul which Access Seekers may share in order to access MI WHQA products, services and facilities.

9.104 In assessing the proportionality of this proposed obligation, ComReg considers that Co-location Rack Interconnection is necessary to promote long term sustainable competition and to the benefit of End Users by providing Access Seekers with the opportunity to lower its costs by sharing backhaul.

9.105 ComReg's preliminary view is that the proposed obligation is justified and proportionate for the reasons set out above.

Shared Services within or between Co-location Racks

9.106 Pursuant to Regulation 12(1) of the Access Regulations, ComReg proposes that Eircom should not restrict Shared Services within or between Co-location Racks. Shared Services are those services (e.g. power, backhaul) which Access Seekers may share in order to access MI WHQA products, services and facilities.

9.107 For example, this will enable an Access Seeker to purchase backhaul services from another Access Seeker who is either co-located in the same Co-location rack or where the individual Co-location racks are connected to one another via the Co-location Rack Interconnection service.

9.108 In addition, an Access Seeker will have the ability to offer wholesale services to another Access Seekers. For example, an Access Seeker can offer another Access Seeker services that are developed using regulated inputs. The justification for this is that it can address identified competition problems in the Zone B MI WHQA market, the retail HQA market and other related markets as Shared Services within or between Co-location Racks promotes innovation, competition, efficient investment, and ultimately benefit End Users.

9.109 Absent regulation, ComReg's preliminary view is that Eircom as a vertically integrated Undertaking with SMP in the Zone B MI WHQA Market, has the ability and incentive to refuse access to Shared Services within or between Co-location racks because it may wish to exclusively supply these services to Access Seekers. In this respect, access to Shared Services within or between Co-location racks is necessary to ensure the development of sustainable and effective downstream competition and to minimise foreclosure concerns that could arise, absent such regulation.

9.110 In ComReg's preliminary view the proposed obligation is justified and proportionate for the reasons set out above.

Requirement to negotiate in good faith

- 9.111 Pursuant to Regulation 12(2)(b) of the Access Regulations ComReg proposes to continue to impose an obligation on Eircom to negotiate in good faith⁶⁹⁷ with Undertakings requesting access to Wholesale MI WHQA products, services and associated facilities.
- 9.112 Having regard to the competition problems identified in Section 8, ComReg considers this measure to be proportionate and justified in order to ensure that genuine bona fide negotiations take place between Eircom and Access Seekers in relation to access.
- 9.113 Eircom has the ability and incentive to expressly or constructively refuse to provide access to MI WHQA. The obligation will also somewhat address imbalances between the bargaining powers of the respective parties in the negotiation process by reducing incentives to unnecessarily prolong negotiations and should also facilitate a more efficient and effective consideration of reasonable requests for access and provision of such access.
- 9.114 ComReg also notes that the obligation to negotiate in good faith implies that the responsibility rests with Eircom to demonstrate that its approach to negotiation with Undertakings is in good faith and that any unmet access requests can be shown to be unreasonable by reference to objective criteria. In this regard, recital 19 of the Access Directive states with respect to requests to SMP Undertakings for access that:
- “...such requests should only be refused on the basis of objective criteria such as technical feasibility or the need to maintain network integrity.”*
- 9.115 ComReg, therefore, proposes that should an access request be refused, or only partially met, then the objective criteria for refusing same should also be provided by Eircom to the requesting Access Seeker at the time of refusal. This will also improve regulatory effectiveness and efficiency should any complaint or dispute be raised with ComReg, as it will provide a useful audit trail for compliance-monitoring purposes.

⁶⁹⁷ Amongst the factors that ComReg may have regard to in any assessment of Eircom’s compliance with its obligation to negotiate in good faith, ComReg may consider the extent to which Eircom has adequately resourced such negotiations.

9.116 ComReg notes that the obligation to negotiate in good faith encompasses the way in which Eircom conducts the negotiations as well as the positions that it takes in them. In investigating an allegation of a failure to negotiate in good faith, ComReg might draw inferences from Eircom's behaviour and from the adequacy of the processes and controls it has put in place to assure compliance with this obligation. For example, ComReg might draw adverse inferences from the following:

- (a) a failure on the part of Eircom to behave in the way that a willing seller would behave when negotiating with a willing buyer;
- (b) a failure by Eircom to respond to proposals made by Access Seekers in a timely and constructive manner;
- (c) a failure by Eircom to deploy participants in the negotiations who had appropriate knowledge and authority, so that negotiations could proceed in a timely manner;
- (d) the absence of effective controls to assure that decision-making processes within Eircom in relation to the negotiations could not be influenced by concerns about the commercial impact on Eircom's downstream retail business; and
- (e) the presence of incentives for individuals within Eircom who participated in or influenced the negotiations that might lead them to receive greater financial or other benefits if the negotiations were to be delayed, or to result in an outcome other than that which might have been freely negotiated between a willing buyer and a willing seller.

9.117 The precise nature of any investigation and the degree to which inferences might be drawn from behaviour would need to be assessed in the context of the actual circumstances of any particular case.

9.118 In ComReg's view, the continuation of this existing remedy does not impose any significant burden on Eircom beyond that which would normally be expected to occur in circumstances involving fair commercial negotiations between parties.

Requirement not to withdraw access to facilities already granted

9.119 Pursuant to Regulation 12(2)(c) of the Access Regulations, ComReg proposes to impose an obligation on Eircom not, without the prior approval of ComReg, to withdraw access to facilities already granted.

- 9.120 For the avoidance of doubt, this does not mean there are no objectively justified circumstances for withdrawing access to Wholesale MI WHQA products, services and associated facilities (such as the unjustified non-payment of wholesale charges), however, this would have to be considered on basis of the facts of the particular circumstances governing the proposed withdrawal of access.
- 9.121 Having regard to the competition problems identified in Section 8, ComReg has identified that Eircom would have the ability and incentive to delay, refuse or withdraw access to Wholesale MI WHQA products, services and associated facilities, either outright or constructively, resulting in restrictions and/or distortions in competition to the detriment of End Users.
- 9.122 As Eircom's network evolves and changes, there is a potential for withdrawal of access. For example, the points of interconnection may change or there may be consolidation of services etc. ComReg considers that the proposed remedy, requiring that Eircom seek ComReg's approval prior to any withdrawal of access, will promote regulatory certainty for all parties without unduly restricting investment incentives.
- 9.123 More specifically, ComReg proposes that Eircom should notify ComReg, in writing, of any proposal to withdraw access to facilities already granted, giving reasons borne out of a detailed analysis of the proposal for service withdrawal, including the impacts that the withdrawal of access is likely to have on existing MI WHQA purchasers and End Users.
- 9.124 Where Eircom proposes to withdraw a service or services, ComReg would retain the right to consult with relevant parties, prior to making a decision on whether to grant or to withhold its approval to any such request.
- 9.125 In ComReg's preliminary view, a five years notification period prior to closure of an MDF, ODF or the relocation of Aggregation Nodes would be appropriate and proportionate. However, ComReg also notes that within the period of this review it is possible that Eircom may seek to put in place a programme to commence the retirement of its copper infrastructure. Any such programme would be considered by ComReg having regard to the principles to be established on foot of ComReg's finalisation of the issues subject to the 2016 Copper Network Transition Consultation⁶⁹⁸.

⁶⁹⁸ "Transition from Eir's copper network, Proposed principles and notification procedures", [ComReg Document 16/01](#), 16 January 2016 ('**2016 Copper Network Transition Consultation**').

Requirement to grant open access to technical interfaces, protocols and other key technologies

- 9.126 Pursuant to Regulation 12(2)(e), ComReg proposes to impose an obligation on Eircom to grant open access to technical interfaces, protocols and other key technologies that are indispensable for the interoperability of services.
- 9.127 Having regard to the competition problems identified in Section 8, ComReg considers that this remedy is both justified and proportionate in order to ensure that, in the context of the provision of access to MI WHQA products, services and associated facilities (including Interconnection services), interoperability of networks and services is ensured.
- 9.128 In so doing, ComReg considers that this obligation will contribute to the development of sustainable downstream competition to the ultimate benefit of End Users.

Requirement to provide access to Eircom's OSS

- 9.129 Pursuant to Regulation 12(2)(h), ComReg proposes to maintain an existing obligation on Eircom to provide access to OSS or similar systems to ensure fair competition in the provision of services.
- 9.130 Access to Eircom's OSS plays an important role in Eircom's provisioning of wholesale services to Access Seekers and its downstream arm. This also includes access to OSS for the purpose of fault and in-service management. Access to OSS is therefore essential, to the effectiveness and efficiency of the operational aspects of the supply of the wholesale MI WHQA products, services and associated facilities that are used as inputs to the supply of service(s) to End Users.
- 9.131 In the absence of Access Seekers being able to gain effective and efficient access to Eircom's OSS, they would likely be at a significant competitive disadvantage relative to Eircom's retail arm in the providing of service(s). Having regard to the competition problems discussed in Section 8, ComReg considers that this obligation is needed to support Eircom's general access obligation because Eircom has the ability and the incentives to impede access to its OSS in order to leverage its market power into downstream and adjacent markets.
- 9.132 The standards of access equivalence (Equivalence of Outputs is the proposed standard) that is to be applied by Eircom in providing access to its OSS or similar software systems is discussed in the context of proposed non-discrimination obligation.

Requirements governing fairness, reasonableness and timeliness of access

- 9.133 As noted in Section 8, ComReg considers that Eircom has the ability and incentive to constructively refuse to supply access (including delay or other behaviours which have the effect of raising rivals' costs) to MI WHQA products, services and facilities in Zone B.
- 9.134 Regulation 12 (3) of the Access Regulations empowers ComReg to attach to relevant access obligations conditions covering fairness, reasonableness and timeliness. In the case of MI WHQA services and facilities, ComReg requires Eircom to ensure that the terms and conditions for access are governed by an SLA⁶⁹⁹.
- 9.135 The purpose of the above requirement is to ensure that access to wholesale services is provided in a fair, reasonable and timely manner, thereby promoting effective downstream competition, to the ultimate benefit of consumers.
- 9.136 To address such issues ComReg proposes to impose the following requirements upon Eircom requiring it:
- (a) to conclude, maintain and update legally binding, fit for purpose SLAs with Access Seekers for MI WHQA products, services and facilities which shall encourage an efficient level of performance;
 - (b) to negotiate in good faith with Access Seekers in relation to the conclusion of legally binding and fit-for-purpose SLAs (either in the case of a new SLA or an amendment to an existing SLA);

⁶⁹⁹ Service Level Agreements or 'SLAs' are legally binding contracts between Eircom and Access Seekers in relation to the service levels which Eircom commits to from time to time, as more particularly set out in the LLRO.

- (c) to provide Access Seekers, at the end of the SLA Negotiation Period⁷⁰⁰, with Eircom's best and final offer ('**BAFO**') in respect of the relevant SLA which, for the avoidance of doubt, shall be fit for purpose; include all relevant information that is required under this paragraph 9.136 and accord with the principles set out in this paragraph 9.136. The SLA Negotiation Period ends with the closing of negotiations and the making of a BAFO by Eircom to Access Seekers with respect to the SLA. When Eircom makes its BAFO, the SLA Negotiation Period is deemed by ComReg to be concluded;
- (d) to ensure that the SLA Negotiation Period includes a discussion on the process for suspension of an SLA and the associated terms and conditions, as described below;
- (e) to ensure that SLAs specify circumstances which trigger the payment of Service Credits⁷⁰¹ such as a failure by Eircom to achieve committed service levels, or the occurrence of specified events (such as incidents of service outage or deterioration), or other appropriate criteria;
- (f) to ensure that SLAs specify the methodology for calculating the quantum of Service Credits and include an example calculation of Service Credits;
- (g) to ensure that circumstances which trigger the payment of Service Credits and the methodology for calculating the quantum of Service Credits, taken together, are fair and reasonable in that they adequately incentivise Eircom to deliver an efficient level of service quality and allow Access Seekers to recoup at a minimum the direct costs and any other loss of value that the Access Seekers incur as a result of the circumstances that had triggered the payment of Service Credits;
- (h) to ensure that application of Service Credits, where they occur, shall be applied automatically and in a timely and efficient manner;
- (i) to ensure that SLAs include, where appropriate, the comprehensive set of terms and conditions governing the circumstances when the SLA can be suspended, and the process to be applied for the suspension of the SLA. Such terms and conditions should be based on objectively defined and measurable parameters;

⁷⁰⁰ SLA Negotiation Period means the duration of time required by Eircom to close negotiations between it and Access Seekers in respect of an amended or new SLA.

⁷⁰¹ Service Credit(s) means a financial credit which is provided by Eircom to an Access Seeker where Eircom has failed to meet the service levels which Eircom commits to from time-to-time in its SLA.

- (j) in relation to an existing product, service or facility, following a request from an Access Seeker (including Eircom) for an amendment to an SLA, Eircom shall, within one (1) month of the receipt of such a request, inform the Access Seeker in writing whether the request for an amendment is accepted or rejected and, if accepted, include details of the SLA Negotiation Period and the associated start date. Negotiations in respect of the amended SLA shall close, unless otherwise agreed with ComReg, within six (6) months of the date the Access Seeker makes such a request. Within one (1) month of the date the Access Seeker makes such a request Eircom may seek an extension to the six (6) month period from ComReg;
- (k) in relation to an amendment to an existing product, service or facility, where Eircom itself initiates the amendment, Eircom shall, within one (1) month of the initiated amendment, inform and seek Access Seekers' views as to whether the proposed product amendment should result in an amendment to the relevant SLA;
- (l) to ensure that its obligations with respect to SLAs have been complied with prior to notifying ComReg of non-pricing amendments or changes to the Leased Line Reference ('LLRO')⁷⁰² resulting from the offer of a new or an amendment to an existing product, service or facility which falls within the scope of the Relevant Market;
- (m) to ensure that the new or amended SLA is implemented and is made available to Access Seekers by the date on which:
 - (i) any amendment or change to an existing product, service or facility;
 - or
 - (ii) the offer of a new product, service or facility comes into effect;
- (n) where the amended SLA does not relate to (m)(i) or (m)(ii) above, Eircom shall ensure that the amended SLA is implemented and is made available to Access Seekers within three months from the end of the SLA Negotiation Period (unless otherwise agreed with ComReg); and

⁷⁰² The LLRO is the offer of contract by Eircom to OAOs in relation to Leased Line (including MI WHQA product, service and facilities) as may be amended from time to time. To the extent that there is any conflict between the LLRO and Eircom's obligations now set out herein, it is the latter which shall prevail;

- (o) within six months (unless otherwise agreed with ComReg) of the Effective Date of this Decision Instrument Eircom shall update its SLAs to include all relevant information and accord with the principles set out above.
- 9.137 In terms of justification, SLAs are intended to minimise the risks of Eircom engaging in actual or constructive refusal to supply effective and efficient access to MI WHQA products, services and facilities. Ultimately, the proposed SLA obligations are designed to ensure fair competition in the provision of MI WHQA products, services and facilities by allowing Access Seekers to compete on a level playing field with Eircom (and its wholesale customers) in downstream markets.
- 9.138 In addition to demanding higher quality and more innovative products and services, End Users expect efficient and timely provision of services, including a high degree of reliability and effective fault management and repair. Therefore, Access Seekers are increasingly reliant on efficient delivery, service quality and after sales support from Eircom in order to be able to compete effectively in downstream markets.
- 9.139 The expected level of service both at the point of delivery and in-life are key selling points which can influence an End User when coming to a decision to take up a product or service or switch service providers. Therefore, for Access Seekers, the quality of SLAs which support regulated wholesale products are an extremely important component of the wholesale input and, in ComReg's view, are integral to the wholesale offering.
- 9.140 Suitable and well-crafted SLAs which support timely and efficient service provision and fault repair are necessary, both at the point of sale and to ensure that the End User experiences a high standard of after sales service and support. Therefore, the SLAs that support MI WHQA products, services and facilities are very important in ensuring effective downstream competition and are necessary to ensure high quality services are offered, ultimately, to End Users⁷⁰³.

⁷⁰³ ComReg notes that WHQA inputs can be used by Access Seekers to deliver a wide range of downstream wholesale services which, ultimately, are directly or indirectly used in the provision of retail services.

- 9.141 The nature of a fit for purpose SLA will depend on many factors, including the nature of the wholesale services provided by Eircom and the nature of the downstream retail services to be provided by Access Seekers. A fit for purpose SLA could be based on a commitment to achieve committed service levels, or on the occurrence of particular events such as service outages, or both. In any particular SLA, it is possible that there may also be other sorts of circumstances in which it is appropriate that Service Credits are triggered. The precise nature of a particular SLA is best settled in negotiations between Eircom and Access Seekers, with the back-up possibility of ComReg using its dispute resolution powers if Access Seekers are unwilling to accept Eircom's best and final offer.
- 9.142 ComReg notes that there are certain types of SLA which could result in Service Credits being paid even by an efficient operator. An example would be an event-based SLA that provided for service credits whenever an outage occurs because even an efficient operator would expect some degree of outages to occur. Depending on the nature of the fit for purpose SLA, it might therefore be reasonable to include a portion of the service credits (if any) that an efficient operator would incur in any calculation of a cost-oriented price for the service in question.
- 9.143 Sub-standard SLAs or delays in finalising SLAs and making them available to Access Seekers have more significant impacts on Access Seekers who are trying to grow market share and win customers from established SPs with significant market shares, such as Eircom. ComReg is of the view that as the incumbent operator with SMP in the Zone B MI WHQA Market, Eircom does not have an incentive to provide fit-for-purpose SLAs which support the delivery of effective or high quality downstream services.
- 9.144 It is ComReg's preliminary view that, in order to conclude an SLA, Eircom must discuss and negotiate, as required, the details of a new or amended SLA with Access Seekers. After the discussions finish (including within the prescribed timelines discussed below), Eircom must offer to Access Seekers its BAFO, which should be a fit for purpose SLA and in accordance with its obligations. At this point the SLA is concluded. Should Access Seekers consider that the concluded SLA is not fit for purpose or does not meet their requirements then they can consider options such as raising a dispute with ComReg who would then consider whether Eircom is in compliance with its regulatory obligations.

- 9.145 ComReg notes that there have been ongoing problems with delays in concluding SLAs resulting in Eircom not introducing or amending SLAs in a timely manner, in the WLA and WCA markets⁷⁰⁴.
- 9.146 In the MI WHQA market, ComReg notes that Eircom proposed a modification to NGN Ethernet delivery SLA on 17 August 2017⁷⁰⁵. Discussions on this SLA development were still ongoing at the PPC/LL Industry Forum on 17 January 2018. ComReg considers that in the MI WHQA market there remains the potential for delays in concluding SLAs⁷⁰⁶, and ComReg considers that if the proposed six (6) month timeline to conclude SLA negotiations was already an obligation in this market, it would incentivise Eircom to progress the negotiations in a timely manner and make a BAFO to Access Seekers after 6 months.
- 9.147 Therefore ComReg considers that the proposed obligations outlined in paragraph 9.136 above are necessary to ensure that SLA modifications are progressed in an efficient and timely manner, with Access Seekers being offered a BAFO by Eircom in a timely and predictable manner.
- 9.148 Delays in the development and availability of suitable SLAs can have an adverse impact on competition and on End Users, as the absence of suitable SLAs ultimately lowers certainty regarding the timeliness and quality of access being provided.
- 9.149 In addition, Access Seekers have expressed concern regarding the suspension of SLAs by Eircom. Such suspensions can have a significant impact on the effectiveness of the SLA. Eircom retain the ability to suspend SLAs, however, it is not always clear as to the process or criteria applied when SLAs are suspended.

⁷⁰⁴ Market 3a: Wholesale Local Access ('WLA') provided at a fixed location as set out in the 2014 Recommendation.

Market 3b: Wholesale Central Access ('WCA') provided at a fixed location as set out in the 2014 Recommendation.

⁷⁰⁵ RAP ID 470 'New NGA SLA'.

⁷⁰⁶ On 24 October 2017, [3<] raised 6 issues in its feedback to Eircom on their SLA proposal. On 13 January 2018, [3<] requested that Eircom provide an update (at the January 2018 PPC/LL Industry Forum) on the SLA proposal taking account of [3<] feedback. At the PPC/LL Industry Forum on 17 January 2018, Eircom disagreed with 5 of 6 issues raised by [3<]. ComReg notes the period of time between [3<] raising the issues with the SLA in October 2017 and Eircom responding in January 2018 and that the response from Eircom resulted from a request by [3<] for a response to be provided.

9.150 ComReg considers, therefore, that there is a need to reconsider the obligations imposed upon Eircom regarding the development of SLAs. In ComReg's preliminary view, there is a need for more granular SLA related obligations, in particular, relating to the timeliness of SLA developments. These proposals are discussed in the following paragraphs.

SLA amendments for existing products

9.151 ComReg accepts and expects that discussions between Eircom and Access Seekers need to take place regarding the details of amended SLAs on foot of a request from an Access Seeker or where Eircom itself seeks to introduce an amendment to an SLA, including the introduction of a new SLA. In such circumstances, Eircom proposes SLAs or SLA parameters for discussion with Access Seekers. However, there is currently no specific time by which these discussions must end, and significant delays can, therefore, occur in concluding SLAs.

9.152 Prolonged discussions on the details of the SLA or prolonged deliberation by Eircom only serves to delay the availability of SLAs, and this is not in the best interests of Access Seekers, competition or End Users. It can also amount to an effective refusal of access. ComReg notes, however, that while discussions between Access Seekers and Eircom are necessary and expected, the responsibility for the timely development of fit for purpose SLAs for MI WHQA products, services or facilities is a matter, in the first instance, for Eircom.

9.153 A request from an Access Seeker for an amended SLA needs to be considered by Eircom in the context of Eircom's obligation to meet reasonable request for access (as well as its other obligations). However, it is important that Eircom considers SLA access requests, and SLA amendments generally, in a fair, reasonable and timely manner. In ComReg's preliminary view, more granular obligations relating to the management of changes to and the introduction of SLAs are required in order to ensure that SLAs are concluded in an effective and timely manner.

9.154 ComReg therefore proposes that the period of time required to discuss an amendment to an existing SLA with Access Seekers be proposed by Eircom at the outset, with this referred to as the SLA Negotiation Period. During the SLA Negotiation Period Eircom must discuss and negotiate proposed SLAs in a proactive manner, and in good faith, with Access Seekers.

- 9.155 After this SLA Negotiation Period, it is ComReg's preliminary view that Eircom should make its BAFO to Access Seekers in relation to SLAs. This BAFO should be fit for purpose and the offer should be made by Eircom to Access Seekers within six months of a request from an Access Seeker, or within six months of when Eircom itself seeks to amend an existing SLA (or introduce a new SLA). At the point Eircom makes its BAFO, the SLA has been concluded.
- 9.156 ComReg also proposes that the SLA offer, i.e. Eircom's BAFO, should be implemented and made available to Access Seekers within three months of the SLA offer being made by Eircom, unless otherwise agreed with ComReg. ComReg considers that this requirement is reasonable, as discussions with Access Seekers will have ended at that point and Eircom are required to make a BAFO which is fit for purpose (and in accordance with its obligations elsewhere) and, therefore, the SLA should be implemented and made available by Eircom.
- 9.157 Eircom shall, therefore, implement a fit for purpose SLA within three (3) months of making its BAFO to Access Seekers, unless otherwise agreed with ComReg. ComReg may, at its sole discretion, grant or refuse any request for an extension to the three month period above.

New product development and changes to existing products

- 9.158 In addition to managing requests from Access Seekers for amended SLAs, it is ComReg's preliminary view that Eircom also must develop new SLAs, or amend existing SLAs where required, when Eircom is planning to introduce new products or changes to existing products. In these circumstances, in order to conclude an SLA, Eircom must initiate the SLA Negotiation Period, at the end of which Eircom must make its BAFO regarding the SLA to Access Seekers, this must happen prior to notification of the amended product or product change to ComReg in accordance with its transparency obligations (discussed elsewhere).
- 9.159 In ComReg's preliminary view, the development of SLAs tends to occur after the product development process has completed. This can raise issues, as the new or amended wholesale product being introduced to the market may not have an SLA, or may include an SLA which is not fit for purpose.
- 9.160 This then requires the subsequent development and conclusion of a new SLA which would take place when the product is already available in the market. ComReg is of the preliminary view that such a scenario is not in the best interests of competition, Access Seekers or End Users, given that the absence of a fit for purpose SLA can undermine the timely and effective use of the products in question.

- 9.161 In ComReg's preliminary view, if Eircom is required to conclude an SLA before new products (including services and facilities) are notified to ComReg, then such problems can be minimised or avoided.
- 9.162 In ComReg's preliminary view, amendments to existing MI WHQA products, services and facilities, need to be considered somewhat separately to new product developments, in particular, with respect to the associated SLAs. Not all amendments to products, services or facilities require changes to the associated SLA. However, as Access Seekers consider that SLAs are, in general, an integral part of a MI WHQA product offering, they are likely to have a view as to whether proposed amendments to existing products, services or facilities require an associated SLA amendment.
- 9.163 Examples of such amendments include, inter alia, process changes, the introduction of new order types and the retirement of existing order types. Access Seekers have, for example, raised concerns that when order types are introduced, changed or replaced by Eircom, the associated SLA is not changed at the same time. This results in a delay before the SLA is amended, and therefore in such situations the new or amended order type is in use without being supported by an SLA.
- 9.164 ComReg is therefore of the view that Eircom should inform Access Seekers of the proposed amendment to the product, service or facility and discuss with Access Seekers whether an amendment to an SLA is required. This includes all proposed changes to existing MI WHQA products, services and facilities.
- 9.165 ComReg is of the preliminary view that should an Access Seeker request an amendment to an SLA, on foot of a proposed amendment to an existing MI WHQA product, service or facility, then any associated new or amended SLA should be concluded before any product amendment is notified to ComReg. In addition, the new or amended SLA must be fully developed, implemented and available to Access Seekers before the new or amended product is made available in the market.
- 9.166 Therefore, should an Access Seeker or Access Seekers form the view that a new or amended SLA is required as a result of the proposed new or amended product, then Eircom must treat this access request in accordance with all of its proposed obligations, including those set out above.
- 9.167 ComReg's preliminary view is, therefore, that Eircom shall:

- (a) conclude, maintain and update legally binding, fit for purpose SLAs with Access Seekers for MI WHQA products, services and facilities, which shall encourage an efficient level of performance;
- (b) negotiate in good faith with Access Seekers in relation to the conclusion of legally binding and fit-for-purpose SLAs (either in the case of a new SLA or an amendment to an existing SLA).
- (c) provide Access Seekers, at the end of the SLA Negotiation Period, with Eircom's BAFO in respect of the relevant SLA which, for the avoidance of doubt, shall be fit for purpose and include all the relevant information that is required and accord with the principles set out through this section. The SLA Negotiation Period ends with the closing of negotiations and the making of a BAFO by Eircom to Access Seekers with respect to the SLA. When Eircom makes its BAFO, the SLA is deemed by ComReg to be concluded;
- (d) ensure that the SLA Negotiation Period includes a discussion on the process for suspension of an SLA and the associated terms and conditions;
- (e) In relation to an existing product, service or facility, following a request from an Access Seeker (including Eircom) for an amendment to an SLA, Eircom shall, within one (1) month of the receipt of such a request, inform the Access Seeker in writing whether the request for an amendment is accepted or rejected and, if accepted, include details of the SLA Negotiation Period and the associated start date. Negotiations in respect of the amended SLA shall close, unless otherwise agreed with ComReg, within six (6) months of the date the Access Seeker makes such a request. Within one (1) month of the date the Access Seeker makes such a request Eircom may seek an extension to the six (6) month period from ComReg.
- (f) In relation to an amendment to an existing product, service or facility, where Eircom itself initiates the amendment, Eircom shall, within one (1) month of the initiated amendment, inform and seek Access Seekers' views as to whether the proposed product amendment should result in an amendment to the relevant SLA.
- (g) Eircom shall ensure that its obligations with respect to SLAs have been complied with prior to notifying ComReg of non-pricing amendments or changes to the LLRO resulting from the offer of a new or an amendment to an existing product, service or facility which falls with the scope of the MI WHQA Market.
- (h) Eircom shall ensure that the new or amended SLA is implemented and is made available to Access Seekers by the date on which:
 - (i) any amendment or change to an existing product, service or facility;

or

(ii) the offer of a new product, service or facility,

comes into effect in accordance with its transparency obligations; and

- (i) Where the amended SLA does not relate to (h)(i) or (h)(ii) above, Eircom shall ensure that the amended SLA is implemented and is made available to Access Seekers within three months of the end of the SLA Negotiation Period (unless otherwise agreed with ComReg).

Suspension of an SLA

9.168 Eircom can suspend the application of SLAs under certain conditions. It is however not sufficiently clear as to what these conditions are, or the process that is followed when Eircom decide to suspend an SLA. SLA suspensions, particularly where they are prolonged, can have a significant impact on the effectiveness of the underlying levels of access being provided.

9.169 ComReg considers that the rules and conditions giving rise to any suspension of an SLA should be a matter for discussion between Access Seekers and Eircom. It is reasonable that Access Seekers can both consider and input into any conditions, rules and the processes associated with any such suspensions. Such discussions should occur before the conclusion of negotiations on the SLA.

9.170 The decision to suspend an SLA should also be based on objective criteria. These criteria should be specified in the SLA, be related to the SLA parameters and be measureable. Access Seekers should have an opportunity to input into the development of these objective criteria.

9.171 The SLA suspension process and the objective criteria used in order to make a decision relating to any suspension of the SLA should be made available to Access Seekers and clearly set out in the SLA.

9.172 Discussions on the conditions that give rise to SLA suspension should be part of the discussions that lead to the conclusion of negotiations regarding the SLA.

9.173 ComReg therefore proposes that Eircom is required to:

- (a) ensure that SLAs include, where appropriate, the comprehensive set of terms and conditions governing the circumstances when the SLA can be suspended, and the process to be applied for the suspension of the SLA. Such terms and conditions should be based on objectively defined and measurable parameters.

Failure to meet SLA committed service levels

- 9.174 The committed service levels in the SLA should be such to ensure that the wholesale services are of sufficient quality to allow Access Seekers to have access in a fair, reasonable and timely manner, thereby enabling them to compete effectively in downstream markets. A high standard of service provisioning and reliable, timely and effective fault repair are important characteristics of the provision of downstream service offerings.
- 9.175 During the sales and after-sales process, Access Seekers may make commitments to End Users, regarding the level of service that can be expected. Access Seekers therefore need certainty regarding the quality of the wholesale service provided and this can be provided for with SLAs which include committed service levels which provide certainty regarding service quality and which allow Access Seekers to make competitive retail service offerings available in downstream markets.
- 9.176 ComReg is of the view that SLAs should incentivise Eircom to provide MI WHQA products, services and facilities to a standard that meets the need of Access Seekers and allows them to provide services of the required quality in downstream markets. ComReg is of the preliminary view that SLAs should include Service Credits such that they adequately incentivise Eircom to deliver an efficient level of service quality and allow Access Seekers to recoup, at a minimum, the direct costs and any other loss of value that the Access Seekers incur as a result of the circumstances that had triggered the payment of Service Credits.
- 9.177 SLA Service Credits should be fair and reasonable and it is reasonable that Access Seekers should not have to bear any administrative burden relating to the payment of Service Credits, as such payments arise from Eircom not meeting committed service levels. Therefore, it is ComReg's preliminary view that, when committed service levels are not met by Eircom, Service Credits should be automatically paid by Eircom to Access Seekers in a timely and efficient manner.
- 9.178 In addition, Access Seekers should understand how Service Credits are calculated in order for them to fully understand how Eircom is incentivised to provide MI WHQA products, services and facilities to the required standard. This would also allow Access Seekers to be able to reconcile Service Credit payments with the requirements of the SLA and with respect to the service provided by Eircom over the relevant period.

9.179 The level of Service Credits and the calculation of payments should be discussed during the SLA Negotiation Period and it is ComReg's preliminary view that the concluded SLA should explain how Service Credits are calculated and the SLA text should include the provision of an example calculation.

9.180 Failure by Eircom to meet SLA committed service levels can result in costs being incurred by Access Seekers resulting from increased churn or payment of compensation to End Users by way of, for example, waiving service charges. ComReg is of the preliminary view that it is reasonable that the Service Credits to be paid by Eircom to Access Seekers in the event that Eircom does not meet the committed service levels in its SLAs should be such that the Access Seekers can recover the costs incurred, arising from such a failure by Eircom.

9.181 It is ComReg's preliminary view therefore that Eircom should be required to:

- (a) ensure that SLAs specify circumstances which trigger the payment of Service Credits such as a failure by Eircom to achieve specified committed service levels, or the occurrence of specified events (such as incidents of service outage or deterioration), or other appropriate criteria;
- (b) ensure that SLAs specify the methodology for calculating the quantum of Service Credits and include an example calculation of Service Credits;
- (c) ensure that circumstances which trigger the payment of Service Credits and the methodology for calculating the quantum of Service Credits, taken together, are fair and reasonable in that they adequately incentivise Eircom to deliver an efficient level of service quality;
- (d) allow Access Seekers to recoup at a minimum the direct costs and any other loss of value that the Access Seekers incur as a result of the circumstances that had triggered the payment of the Service Credits; and
- (e) ensure that application of Service Credits, where they occur, shall be applied automatically and in a timely and efficient manner.

9.182 A number of the above SLA related conditions are currently imposed upon Eircom through its existing regulatory obligations⁷⁰⁷. However, there are a number of additional obligations which ComReg considers are justified and proportionate as they primarily require Eircom to improve the planning and timing of the availability of SLAs. These proposed obligations should:

⁷⁰⁷ 2008 Decision, Appendix A: Decision Instrument Section 7.3.

- (a) encourage Eircom to achieve acceptable levels of service performance in the provision of services to Access Seekers and to ensure that a level playing field is created in terms of the access provided by Eircom to Access Seekers and that which Eircom supplies to itself;
- (b) ensure that Eircom engages in genuine bona-fide negotiations with Access Seekers when seeking to agree fit-for-purpose and appropriate SLAs;
- (c) provide certainty regarding the timeliness of the engagement by Eircom with Access Seekers during SLA discussions and the conclusion of negotiations;
- (d) provide assurances to Access Seekers surrounding the levels of service to be provided by Eircom so that they are, in turn, able to offer consequential service assurances to their own downstream customers and prospective customers;
- (e) ensure that Eircom is adequately incentivised to achieve the committed service levels set out in its SLAs by ensuring that any Service Credits to be paid by Eircom to Access Seekers are fair and reasonable;
- (f) establish committed service levels against which the standards of performance achieved by Eircom can be readily measured and compared;
- (g) hold Eircom accountable for its committed service levels by establishing a mechanism for Access Seekers to receive Service Credits where committed service levels are not achieved by Eircom; and
- (h) Ensure that Eircom does not seek to fetter Access Seekers' ability to effectively access MI WHQA inputs in the provision of downstream services in markets where Eircom is or may also be competing.

Requirement regarding Timeliness of Product Development

9.183 Pursuant to Regulation 12(3) of the Access Regulations, ComReg proposes to impose an obligation on Eircom to develop new MI WHQA products, services and facilities or make changes to existing MI WHQA products, services and facilities in a timely manner.

- 9.184 A properly functioning product development process⁷⁰⁸ is particularly important for ensuring the development of effective competition in downstream markets and to allow Access Seekers to plan for and provide innovative services to downstream customers, including End Users. Uncertainty with regard to the content and timing of product updates creates uncertainty in the market and can potentially lead to increased costs across the industry and to concerns regarding the availability of information to Eircom's downstream arm in advance of competing retail operators.
- 9.185 ComReg is aware that there can be difficulties with respect to agreeing product specifications in a timely manner. While it is important to have a clear product specification, undue delays in this regard can serve only to prolong the time taken to complete a product development. ComReg has concerns regarding undue delays being experienced by Access Seekers at this point in the product development process, in relation to product development in other markets⁷⁰⁹.
- 9.186 ComReg's preliminary view is that it is important that Access Seekers have adequate input into the prioritisation of product developments (including relative to those product developments which appear to be related to and which emanate from Eircom's downstream arm) and have clarity with respect to the criteria used by Eircom for such prioritisation.
- 9.187 ComReg is of the preliminary view that Eircom's governance of Access, Non-Discrimination and Transparency must be comprehensively applied to both proactive support for the development of product specifications and subsequent prioritisation of product developments.
- 9.188 ComReg has formed the preliminary view that due to concerns regarding the development of wholesale regulated access products ('**RAP(s)**') generally⁷¹⁰, and the importance of ensuring an effective product development process in the Zone B MI WHQA Market that specific obligations relating to the timeliness of product development should be imposed on Eircom in the MI WHQA Market.

⁷⁰⁸ The Eircom Regulated Access Product ('**RAP**') Product Development Process is a series of steps undertaken by Eircom to bring a product idea from concept through to launch.

⁷⁰⁹ Operational Assessment of eir's Regulatory Governance Model, Cartesian, July 2017, ComReg Document No.17/64(b) ('**Cartesian Report**').

⁷¹⁰ Cartesian Report.

- 9.189 ComReg notes that Eircom has a single product development process which is used in the development of all RAPs, across all regulated Markets. ComReg considers that there is the potential for issues to arise in the Zone B MI WHQA Market relating to the timeliness of product development. ComReg therefore proposes that obligations are imposed upon Eircom with respect to product development timelines. Such obligations are needed to ensure that access is provided in a fair, reasonable and timely manner and to ensure efficient and timely product development and the accuracy and availability of information to Access Seekers with respect to the progress of all product developments⁷¹¹.
- 9.190 Transparency and certainty with respect to product developments and process changes should enable Access Seekers to more effectively plan for such changes and, where necessary, to implement consequential changes to their own systems and processes.
- 9.191 ComReg notes that the Eircom product development process is complex, needs to accommodate a number of competing priorities and relies on finite resources. As would be expected of a process of such complexity, the Eircom RAP Product Development Process uses a structured approach which contains a number of key decision gates and development stages.
- 9.192 As such, the structure of the process already lends itself to providing greater clarity to Access Seekers with respect to the product development process and the progress of developments through the process.
- 9.193 A request for access is considered to be any written request received from an Access Seeker, or indeed from Eircom's downstream arm, for a new access product or for a change to an existing access product. A product, in this instance, is taken to mean any regulated wholesale access product, service or facility or associated processes.
- 9.194 There are many sources for such access requests. They can currently emerge as a Statement of Requirements ('**SOR**') which can be submitted either through industry forums or directly to Eircom by one or more Access Seekers.

⁷¹¹ Additionally Access Seekers will have the ability to monitor these obligations through transparency obligations set out in paragraphs 9.284 to 9.297 below.

- 9.195 Access requests can also emanate owing to a requirement to change an Eircom downstream product which, as a consequence, requires a modification to an upstream MI WHQA product. In other cases an Access request may be as a result of operational or network related issues which can be remedied through product development.
- 9.196 Eircom may also need to change existing process or product features for wholesale products or develop new processes or products in order to ensure compliance with its obligations or indeed arising from the evolution of products and services.
- 9.197 Having regard to the above, pursuant to Regulation 12 of the Access Regulations, ComReg is proposing to impose the following obligations⁷¹² on Eircom⁷¹³.
- 9.198 Following a request from an Access Seeker(s) (including Eircom itself⁷¹⁴) for a new product, service or facility or a non-pricing amendment to an existing product, service or facility, Eircom shall, meet the following timelines, taking due account of its other obligations including its non-discrimination obligations:
- (a) within three (3) working days of receipt of request, confirm in writing that the request has been received;
 - (b) within fifteen (15) working days of receipt of request, confirm to the Access Seeker whether or not the request is for a new or amended product, service or facility and whether or not the request falls within the scope of Eircom's obligations⁷¹⁵. Where an Access request is refused (or refused in part) then Eircom shall comply with its other proposed obligations, including those relating to requirements to negotiate in good faith (and provide the objective reasons for any refusal or partial grant of an access request).

⁷¹² It should be noted that the obligations proposed relate only to the non-pricing aspects of the product, service or facility requested.

⁷¹³ Additionally Access Seekers will have the ability to monitor these obligations through transparency obligations set out in paragraphs 9.284 to 9.297 below.

⁷¹⁴ References to a request from an Access Seeker also includes a request from Eircom.

⁷¹⁵ Eircom is also required to comply with its obligations regarding the refusal or partial meeting of an access request and the associated requirement to provide the reasons for such.

- (c) within thirty (30) working days of receipt of request, confirm whether the requesting Access Seeker has provided it with sufficient information to process the request (unless otherwise agreed between Eircom and the Access Seeker), including the Access Seekers' view on the priority of the request relative to other requests pertaining to the Zone B MI WHQA Market that have already been submitted by that Access Seeker. During the thirty (30) day period Eircom may seek any clarifications that it may reasonably require from the Access Seeker regarding the request. Eircom or the Access Seeker may, for any particular request, seek agreement from ComReg that the thirty (30) working day period may be extended; and
- (d) within eighty five (85) working days, unless otherwise agreed with ComReg, confirm in writing to the Access Seeker whether it agrees to provide the requested new or amended product, service or facility. Where the request is refused (or refused in part), Eircom shall comply with its obligations to give written reasons for its decision at the time of refusal⁷¹⁶. In the case of any divergence in Eircom's product proposal compared to what was originally requested, the relevant details such as each of the objective reasons for any such divergence shall be documented and provided by Eircom to Access Seekers within 85 working days in a fair and reasonable manner. Should further analysis, by Eircom, during the RAP Product Development Process give rise to new issues or concerns which bring into question the reasonableness of the Access request, then Eircom should fully explain (i.e. objectively justify) to Access Seekers why a particular development, which it previously considered was reasonable and that it had previously agreed to develop, requires amendment or cannot progress to completion.

⁷¹⁶ Eircom is also required to comply with its obligations regarding the refusal or partial meeting of an access request and the associated requirement to provide the reasons for such.

- 9.199 ComReg notes that the proposed obligations are modelled on the timelines for product development as proposed by ComReg in its Consultation on its market analysis for the WLA/WCA Markets⁷¹⁷, having taken account of Respondents views. ComReg notes that Eircom has a single product development process which is used in the development of all RAPs, across all regulated Markets. ComReg is, therefore, of the view that these proposed product development obligations should not create an undue burden on Eircom, but should serve to reinforce the practical application and operation of access obligations.
- 9.200 MI WHQA services play an important role in facilitating the provision of Information and Communications Technology ('ICT') services to medium and large sized businesses, including multi-national businesses, as well as public sector institutions (e.g. hospitals, Government departments, educational facilities). MI WHQA services typically support business critical ICT services. Predictable supply and repair of MI WHQA services are key metrics for consumers opting to purchase such services.
- 9.201 MI WHQA is a wholesale input into the provision of various retail data connectivity services for businesses, including for use in the provision of internet access, facilitating connectivity between a businesses' site locations for the purpose of transferring information and/or communications, and data back-up/remote storage solutions such as cloud storage/computing.
- 9.202 Given that the provision of MI WHQA products, services and facilities allow Access Seekers to offer high value services which are of particular importance to the business community, it is ComReg's view that this obligation is necessary to ensure that Access Seekers that Eircom engage fully with Access Seekers and develop RAPs that meet Access Seekers requirements, in a timely and effective manner.

Summary of Preliminary Conclusions on Access Obligations

- 9.203 Having regard to the analysis set out in paragraphs above in paragraphs 9.42 to 9.202 above, ComReg's preliminary view is that proposed Access obligations are proportionate and justified. The proposed specific requirements include:
- (a) to meet reasonable requests for access to MI WHQA products, services and facilities in Zone B;

⁷¹⁷ Market Reviews: Wholesale Local Access (WLA) provided at a Fixed Location, Wholesale Central Access (WCA) provided at a Fixed Location for Mass Market Products, Consultation and Draft Decision, ComReg Document 16/96, November 2016.

- (b) to provide access to specific MI WHQA products, amongst others, wholesale NGN Ethernet (WSEA, WES, WEIL) and WDM services;
- (c) to provide access to specific MI WHQA products in order to connect to the Zone B MI WHQA Market, amongst others, wholesale NGN Ethernet and WDM services;
- (d) to provide access to
 - (i) Interconnection Services, namely IBH, ISH, CSH, and ENH and WUP (discussed in paragraphs 9.67 to 9.74 above);
 - (ii) Interconnection Sharing service (discussed in paragraphs 9.75 to 9.80 above); and
 - (iii) Co-location, Co-location resource sharing, Co-location Rack Interconnection and Shared Services within or between Co-location Racks (discussed in paragraphs 9.81 to 9.110 above);
- (e) to negotiate in good faith with Undertakings requesting Access (discussed in paragraphs 9.111 to 9.118 above);
- (f) not to withdraw Access to facilities already granted without the prior approval of ComReg (discussed in paragraphs 9.119 to 9.125 above);
- (g) to grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities (discussed in paragraphs 9.126 to 9.128 above);
- (h) to provide access to OSS or similar software systems necessary to ensure fair competition in the provision of services (discussed in paragraphs 9.129 to 9.132 above), and
- (i) to provide access in accordance with a range of conditions governing fairness, reasonableness and timeliness (discussed in paragraphs 9.133 to 9.202 above).

Practical application of the Access Remedies in the market

9.204 In order to assist understanding in the practical application of the proposed Access Remedies, ComReg has set out in Appendix 9 an explanation of how these would operate in practice in the MI WHQA Market in the context of the proposed trunk-terminating boundary⁷¹⁸ as described in Section 4.5. This is to allow Access Seekers fully understand the proposed regulated services that may be available to them and for Eircom to understand the proposed remit of its regulatory obligations in the Zone B MI WHQA Market and corresponding Interconnection obligations in the MI WHQA Market.

9.5.2 Non-Discrimination Remedies

Overview

9.205 The application of an ex ante non-discrimination remedies seeks to prevent a dominant, vertically-integrated Undertaking from engaging in discriminatory (price or non-price) behaviour that could hinder the development of sustainable and effective competition in wholesale and retail markets.

9.206 In Section 8 ComReg identified that, absent regulation, Eircom has the ability and incentive to engage in behaviours that could adversely impact upon downstream competition and consumers in the Zone B MI WHQA Market. For example, Eircom could offer Zone B MI WHQA market products, services and facilities at discriminatory prices, terms and conditions, and service/repair quality to different Access Seekers or between Access Seekers and its own downstream arm.

9.207 As noted in the Access Directive⁷¹⁹, the principle of non-discrimination is designed to ensure that Undertakings with market power do not distort competition, in particular, where they are vertically integrated Undertakings that supply services to Undertakings with whom they compete on downstream markets.

9.208 Regulation 10 of the Access Regulations provides that ComReg can impose non-discrimination remedies in relation to access or interconnection on an Undertaking designated with SMP, in particular to ensure it behaves in such a way that it:

⁷¹⁸ The demarcation of the competitive trunk market has been described as LL traffic transported between 107 of Eircom's 192 NGN WEIL compatible Aggregation Nodes. These are referred to as "Trunk Nodes" here. The remaining 85 Nodes are referred to as "Non-Trunk Nodes".

⁷¹⁹ Recital 17 of the Access Directive.

- (a) applies equivalent conditions in equivalent circumstances to other Undertakings providing equivalent services; and
- (b) provides services and information to others under the same conditions and of the same quality as it provides for its own services or those of its subsidiaries or partners.

9.209 In this respect, non-discrimination obligations can be standalone, but can also support other obligations such as those relating to access, transparency and price control.

9.210 An overview of existing non-discrimination obligations is set out in paragraph 9.17 above.

Proposed Non-Discrimination Remedies

9.211 Pursuant to Regulation 10 of the Access Regulations, ComReg is proposing to continue to impose general non-discrimination obligations on Eircom in order to address identified competition problems that could arise in the Zone B MI WHQA Market.

General non-discrimination remedies

9.212 ComReg is proposing to require that Eircom:

- (a) applies equivalent conditions in equivalent circumstances to other Undertakings requesting, or being provided with Access (including Access to MI WHQA products, services and facilities in Zone B) or requesting or being provided with information in relation to such Access; and
- (b) provides access (including access to MI WHQA products, services and facilities in Zone B) and information to all other Undertakings under the same conditions and of the same quality as Eircom provides to itself or to its subsidiaries, affiliates or partners.

9.213 For the avoidance of doubt, it is ComReg's further preliminary view that the non-discrimination obligations above should apply irrespective of whether or not a specific request for services or information has been made by an Undertaking to Eircom. For example, if information or a service is provided by Eircom following a request from one Undertaking, Eircom is obliged to offer this to other Undertakings, notwithstanding that such other Undertakings have not made a request for it (or known to make a request for it). This is to ensure fair treatment of all Undertakings.

9.214 These obligations are intended to ensure that Eircom does not favour its downstream arm, or unduly favour any particular Access Seeker in the provision of MI WHQA products, services and facilities in Zone B such that it might otherwise restrict or distort competition in this market or any downstream or adjacent market, ultimately impacting on the development of sustainable retail competition.

Specification of the non-discrimination standards with respect to the provision of Zone B MI WHQA market

9.215 Pursuant to Regulation 10 of the Access Regulations, ComReg also proposes that the non-discrimination obligations should be applied on, at least, an Equivalence of Outputs ('**EoO**')⁷²⁰ standards basis. When Eircom provides Access Seekers with access to MI WHQA products, services and facilities in Zone B, including access to information, Eircom would be required to do so in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as Eircom provides to itself, albeit potentially using different systems and processes.

9.216 ComReg considers that this EoO standard is appropriate in the context of MI WHQA products, services and facilities in Zone B, particularly given that the existing provision of MI WHQA products, services and facilities in Zone B is largely over a legacy network and legacy systems. ComReg considers that adopting an Equivalence of Inputs ('**EoI**')⁷²¹ standard would not be proportionate at this time. In particular, the OSS and wholesale interfaces that are in place and used for the provision of Eircom's suite of existing legacy MI WHQA products, services and facilities in Zone B have already been developed. These OSS and wholesale interfaces would likely require substantial investment in order to upgrade or replace them to meet an EoI standard. This would not be justifiable or proportionate in the circumstances of the Zone B MI WHQA market as it would likely involve costly systems re-development, the incremental benefits of which would not likely be substantial.

⁷²⁰ Equivalence of Outputs ('**EoO**') essentially refers to provision of products, services, facilities, and information by an SMP Undertaking to Access Seekers such that such products, services, facilities, and information is provided to Access Seekers in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP Undertaking provides to itself, albeit potentially using different systems and processes.

⁷²¹ Equivalence of Inputs ('**EoI**') essentially refers to provision of products, services, facilities, and information by an SMP Undertaking to Access Seekers such that such products, services, facilities, and information is provided to Access Seekers in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP Undertaking provides to itself, and using the same systems and processes.

9.217 ComReg anticipates, that the EoO standard could be adopted in the Zone B MI WHQA market without a significant additional cost burden being placed on Eircom, while at the same time addressing potential discriminatory concerns in a proportionate manner.

Transparency Remedies to Support Non-Discrimination

9.218 As discussed later in paragraphs 9.252 to 9.275, ComReg is proposing to impose a requirement on Eircom to publish a specific set of KPIs relevant to the Zone B MI WHQA Market (versus a specific set of KPIs relevant to Zone A MI WHQA and retail HQA Market) on its public website (instead of the existing overall MI WHQA Market KPIs) in accordance with the existing requirements as set out in the 2011 KPI Decision remedies. KPIs can support the monitoring of non-discrimination obligations and, in so doing, provide assurances to Access Seekers regarding the levels of service provided by Eircom to its downstream arm relative to that provided to Access Seekers. It also facilitates ComReg in fulfilling its role in monitoring the markets.

9.219 ComReg is proposing to modify the transparency requirement taking into account the current dynamics in the Zone B MI WHQA market. This modification is discussed in paragraphs 9.252 to 9.275.

Summary of Preliminary Conclusions on Non-Discrimination Obligations

9.220 Having regard to the analysis set out above in paragraphs 9.205 to 9.219, ComReg's preliminary view is that proposed non-discrimination obligations are proportionate and justified.

9.221 ComReg's preliminary view is that there is a need to continue the imposition of non-discrimination obligations on Eircom for the supply of MI WHQA products, services and facilities in Zone B, in particular Eircom is to be required to:

- (a) apply equivalent conditions in equivalent circumstances to other Undertakings requesting, or being provided with Access (including Access to MI WHQA products, services and facilities in Zone B) or requesting or being provided with information in relation to such Access; and
- (b) provide access (including access to MI WHQA products, services and facilities in Zone B) and information to all other Undertakings under the same conditions and of the same quality as Eircom provides to itself or to its subsidiaries, affiliates or partners.

9.222 ComReg also proposes that the non-discrimination obligations above should be applied on, at least, an EoO standards basis.

9.5.3 Transparency Remedies

Overview

9.223 Regulation 9 of the Access Regulations provides that ComReg may, inter alia, specify obligations to ensure transparency in relation to access or interconnection requiring an SMP Undertaking to make public specified information such as accounting information, technical specifications, network characteristics, prices, and terms and conditions for supply and use, including any conditions limiting access to or use of services and applications where such conditions are permitted by law.

9.224 Transparency obligations can be standalone, but can also support other obligations being imposed and usually relate to requirements to make specified information publicly available.

9.225 An overview of existing transparency obligations is set out in paragraph 9.18 to 9.20 above.

Proposed Transparency Remedies

9.226 Pursuant to Regulation 9 of the Access Regulations, in Section 8 ComReg identified that Eircom has the ability and incentive to engage in a range of exploitative and exclusionary behaviours which can impact adversely on competition and consumers.

9.227 A transparency obligation is considered necessary in order to monitor and ensure the effectiveness of any access, non-discrimination, (and other obligations such as price control) as it allows ComReg to monitor the compliance of an SMP Undertaking's pricing and other behaviour (such as with respect to terms and conditions of use, quality or technical parameters) with non-discrimination and access obligations, and to address potential competition problems relating to price or quality discrimination.

- 9.228 Apart from the above, as noted in the Access Directive⁷²², transparency of terms and conditions for access and interconnection, including prices, also serve to speed-up negotiations between Undertakings, avoid disputes and give confidence to market players that a service is not being provided on discriminatory terms. Openness and transparency of technical interfaces can also be particularly important in ensuring interoperability. Transparency on prices (and changes to them) is also likely to provide the necessary clarity to Access Seekers in order that they can consider impacts on the structure or level of retail prices. Transparency also provides the means for Eircom to demonstrate that access to MI WHQA products, services and facilities in Zone B is being provided in a non-discriminatory manner.
- 9.229 ComReg therefore considers that Eircom should be required to comply with a range of transparency obligations in order to minimise information asymmetries and facilitate effective access to MI WHQA products, services and facilities in Zone B and to ultimately promote effective competition in downstream and related markets.
- 9.230 ComReg also proposes that Eircom should be required, as specified by ComReg in writing from time to time, to make public on its publicly available wholesale website, information that may be reasonably requested by ComReg that is relevant to the provision of MI WHQA products, services and facilities in Zone B such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices. This allows ComReg to proactively intervene in specific cases where it considers that transparency is lacking regarding the provision of information in relation to MI WHQA products, services and facilities in Zone B notwithstanding the standard transparency measures proposed above being in place.
- 9.231 Additionally, at a specific level, ComReg proposes that Eircom should be required to:
- (a) publish a Leased Line Reference offer ('**LLRO**') including a price list which should contain a minimum specified set of details, including prices; these prices should be sufficiently unbundled so that Access Seekers are not required to pay for services that are not requested; and be subject to a transparent change management process, including advance public notification of proposed changes to products and prices;

⁷²² Recital 16 of the Access Directive.

- (b) provide, in accordance with specified timeframes, advance notification to Access Seekers and to ComReg of proposed changes to the LLRO and to prices;
- (c) to publish on its publicly available website KPIs, and SLAs relating to MI WHQA products, services and facilities in Zone B; and
- (d) meet requirements concerning access to confidential and/or commercial information.

9.232 These obligations largely mirror those imposed under the 2008 Decision, the 2011 KPI Decision, 2011 Access and Transparency Decision and subsequent decisions.

9.233 ComReg also notes that, pursuant to regulation 9(3) of the Access Regulations, it can issue directions requiring Eircom to make changes to the LLRO to give effect to obligations imposed by ComReg, and to publish the LLRO with such changes. Eircom must comply with any such directions made by ComReg.

9.234 ComReg is also proposing to impose additional transparency obligations on Eircom concerning product development, as well as enhancing existing requirements concerning the provision of network roll-out information.

9.235 These and other proposed remedies are discussed in more detail below.

Transparency requirements concerning LLRO and Price Changes

9.236 ComReg proposes that Eircom should make publicly available and keep updated on its website, an LLRO, which should contain a specified minimum list of items. The key purpose of the LLRO is to provide current or potential Access Seekers with all relevant information about the MI WHQA products, services and facilities that are or are intended to be provided by Eircom.

9.237 More specifically, ComReg considers that the LLRO should include at least the following items:

- (a) A description of the offer of contract for access broken down into components according to market needs;
- (b) A description of any associated contractual or other terms and conditions for supply of access and use, including prices, (the latter being a '**Network Price List**'); and
- (c) A description of the technical specifications and network characteristics of the access being offered; and

- (d) The terms, conditions, service level agreements, guarantees and other product related assurances associated for MI WHQA products, services and facilities.

9.238 Overall, the proposed obligations are largely consistent with existing obligations which ComReg considers are not unduly burdensome and are required for the efficient and effective operation of the market.

9.239 In order to address the concerns discussed above, ComReg considers it important that both it and Access Seekers have visibility over the non-pricing and pricing terms and conditions associated with Eircom's MI WHQA products, services and facilities, thereby supporting the effective monitoring and enforcement of Eircom's access, non-discrimination, pricing and other obligations and enabling Access Seekers to make purchasing decisions in a timely manner.

9.240 Apart from the above, ComReg also considers that the LLRO and Network Price List should be sufficiently unbundled so as to ensure that Access Seekers are not required to pay for products, services or facilities which are not necessary for the Access requested.

9.241 ComReg considers that the format of the LLRO and the price list should be based on the versions that are currently published⁷²³ on Eircom's wholesale website (or at the date on which ComReg's decision concerning its Zone B MI WHQA market analysis is published), thereby continuing the current practice.

Transparency requirements governing LLRO change management

9.242 ComReg also proposes to impose various transparency requirements governing change management of the LLRO and its associated elements/documentation in order to enable Access Seekers to have visibility of any changes to be made or made to the LLRO over time. This will also support monitoring and enforcement of compliance with SMP obligations.

9.243 In this respect, ComReg proposes that Eircom should:

⁷²³ The current version of Eircom's LLRO at [http://www.Eircomwholesale.ie/Reference-Offers/LLRO/\(Version L dated 1 July 2015\)](http://www.Eircomwholesale.ie/Reference-Offers/LLRO/(Version L dated 1 July 2015)).

- (a) Publish and keep updated on its public website both clean (or unmarked) and tracked changed (or marked) versions of its LLRO. The tracked change version of the LLRO must also be sufficiently clear to allow Access Seekers to clearly identify all actual and proposed amendments to regulated products from the preceding version of its LLRO.
- (b) publish and keep updated on its public website an accompanying LLRO change matrix which lists all of the amendments incorporated to regulated products or to be incorporated in any amended LLRO (the '**LLRO Change Matrix**').
- (c) publish and keep updated on its publicly available website both clean (unmarked) and tracked changed (marked) versions of the Network Price List(s) for MI WHQA products. The tracked change version of the Network Price must also be sufficiently clear to allow Access Seekers to clearly identify all actual and proposed amendments from the preceding version of its Network Price List of regulated products.
- (d) publish and keep updated on its publicly available website a Network price list change matrix, which lists all of the amendments incorporated to regulated products or to be incorporated in any amended Network Price List (the '**Price List Change Matrix**').

9.244 Eircom shall also maintain and keep publicly available historic versions of the above documents.

9.245 Eircom shall, as specified by ComReg in writing from time to time, make publicly available on its wholesale website, information such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices, in respect of the products, services and facilities referred to in Sections 14 and 15 above.

9.246 For the avoidance of doubt, the obligations set out above apply irrespective of whether or not a specific request for products, services, facilities or information has been made by an Access Seeker to Eircom.

Advance notification timeframes for LLRO and price changes

9.247 ComReg proposes to impose obligations upon Eircom to provide advance notification of proposed amendments or changes to the LLRO and related prices according to specified timeframes. This is to provide sufficient notification to Access Seekers to allow them to factor in such proposed changes into the commercial decision making activities and to make any necessary adjustments or developments to billing or other systems, as appropriate. These advance notification requirements also provide a transparent and available mechanism according to which ComReg can monitor compliance by Eircom with its access, non-discrimination, pricing and other obligations proposed in this Consultation.

9.248 ComReg proposes that Eircom should be subject to the following obligations with respect to changes to the LLRO and the Network Price List:

- (a) Eircom shall (unless otherwise agreed by ComReg) publish, on its publically available website - at least three months in advance - any proposed changes to the LLRO and any proposed changes to Wholesale prices and the application of such prices for the purposes of notifying all interested parties of such changes.
- (b) Eircom shall notify ComReg at least five working days in advance of any such publication taking place. This period of five working days may be varied from time to time with the agreement of ComReg.

9.249 The above transparency requirements require Eircom to notify ComReg in the event of text changes to the LLRO or changes to prices. However, it should be noted that this notification does not include an approvals process. For the avoidance of doubt, in relation to existing contracts, text changes proposed by Eircom, arising from the text change process as detailed above, apply to Eircom's obligations only and are not automatically incorporated into existing contracts, as changes to Access Seeker contractual obligations. Eircom may negotiate with Access Seekers regarding any such changes.

Transparency requirements on wholesale billing

9.250 ComReg proposes to require Eircom to provide transparency in its billing charges for MI WHQA products, services and facilities to its wholesale customers, and to ensure that its wholesale invoices for such are sufficiently disaggregated, detailed and clearly presented so that an Access Seeker can reconcile the invoice to Eircom's LLRO and Network Price Lists.

9.251 This should ensure that Access Seekers have the clear ability to monitor the wholesale charges being levied on them and facilitate an auditable means of detecting any billing anomalies and/or non-compliance with regulatory obligations. Eircom should therefore, continue in its LLRO, the requirement to invoice Access Seekers on a monthly basis, one month in advance of provision of the service with the credit terms remaining at 30 calendar days.

Transparency requirements regarding KPIs and SLAs

9.252 In the context of non-discrimination remedies discussed in paragraphs 9.218 and 9.219 above, KPIs can support the monitoring of non-discrimination obligations and, in so doing, provide assurances to Access Seekers regarding the levels of service provided by Eircom to its downstream arm relative to that provided to Access Seekers.

9.253 ComReg also considers that published SLAs are an important aspect of MI WHQA Products as SLAs provide Access Seekers with information regarding the expected performance of the product and allows a comparison to be made between actual performance and the commitments made by Eircom regarding the performance of the product.

9.254 ComReg is therefore proposing to require Eircom to continue to publish KPIs and SLAs. However, ComReg is proposing to amend the current requirement on Eircom to publish KPIs on its public website with respect to service assurance for MI WHQA products, services and facilities in Zone B in accordance with the existing requirements as set out in the 2011 KPI Decision.

9.255 The requirements regarding KPIs were specified in the 2011 KPI Decision which specified a range of Metrics for various categories of LLs against which Eircom would report. Given the preliminary findings with respect to SMP in the Zone B MI WHQA market, ComReg proposes that Eircom will to publish metrics for Zone B MI LLs and the 2011 KPI Decision would be amended accordingly.

9.256 It is ComReg's position that if Access Seekers have concerns that Eircom's self-supply of wholesale inputs is to a higher standard than the regulated wholesale inputs offered to Access Seekers this may potentially undermine competition. The proposals in this consultation, therefore, would require Eircom to publish Key Performance Indicators ('KPIs') in specific regulated markets. The KPIs are intended to provide objective measures of the most important aspects of the wholesale products and services provided by Eircom.

- 9.257 MI WHQA services play an important role in facilitating the provision of Information and Communications technology ('ICT') services to medium and large sized businesses, including multi-national businesses, as well as public sector institutions (e.g. hospitals, Government departments, educational facilities). MI WHQA services typically support business critical ICT services. Predictable supply and repair of MI WHQA services are key metrics for consumers opting to purchase such services.
- 9.258 MI WHQA is a wholesale input into the provision of various retail data connectivity services for businesses, including for use in the provision of internet access, facilitating connectivity between a businesses' site locations for the purpose of transferring information and/or communications, and data back-up/remote storage solutions such as cloud storage/computing.
- 9.259 ComReg considers that consumers should be reassured that the quality of upstream inputs provided to Access Seekers for the provision of retail (and other) services are comparable with upstream inputs used in the provision of Eircom's own services. Therefore, the publication of wholesale performance statistics in isolation would not, on its own, demonstrate and make transparent compliance with non-discrimination obligations discrimination in a particular market.
- 9.260 ComReg therefore proposes that the publication of KPIs, for both wholesale and equivalent retail services, is vital in order to facilitate transparency on information on the relative quality of wholesale and retail services and, in turn be supportive of non-discrimination and access obligations.
- 9.261 The obligation to publish KPIs falls within the context of Eircom's transparency obligations in the relevant markets, and this enhanced transparency would be intended to demonstrate the degree to which common or equivalent inputs are supplied in accordance with Eircom's obligations of non-discrimination.
- 9.262 As an example of the scope and purpose of KPIs, the "Revised 2012 BEREC Common Position"⁷²⁴ notes that an

"NRAs should impose a generic requirement on SMP operators to provide Key Performance Indicators (KPIs) as a means to monitor compliance with a non-discrimination obligation and ensure that SMP operators fulfil their SLAs"

⁷²⁴ Revised BEREC Common Position on best practices in remedies as a consequence of a SMP position in the relevant markets for wholesale leased lines, BoR (12) 126, page 12.

- 9.263 KPIs should be published⁷²⁵ so that Access Seekers using MI WQHA products, service and facilities can compare the comparative performance of Eircom's self-supply to its downstream arm with the wholesale inputs offered and supplied by Eircom to them. Access Seekers need to be able to compare the levels of service experienced by that Access Seeker relative to the levels of service provided by the SMP operator a) to its downstream businesses and b) all Access Seekers.
- 9.264 Thus, Access Seekers would have the ability to compare their level of services experienced and provide assurances in the supply of Eircom's wholesale products and ultimately their related supply of services to retail end users. .
- 9.265 Eircom was designated with SMP in this market in accordance with the 2008 Decision.
- 9.266 At section 8 of the 2008 Decision Eircom already has the obligation of non-discrimination. In addition, at section 9 Eircom has an obligation of transparency imposed on it. At section 9.9 Eircom are obligated to publish KPIs, subject to further consultation. In this Further Consultation ComReg has proposed to impose transparency and non-discrimination obligations upon Eircom.
- 9.267 ComReg, pursuant to this Further Consultation and in accordance with Regulations 10, 11 and 17 of the Access Regulations, proposes to further specify requirements to be complied with in relation to Eircom's transparency obligations, to direct Eircom to publish the relevant KPIs for the MI WHQA Market. ComReg does not propose to set any KPI targets as part of this Further Consultation.
- 9.268 ComReg considers that in order to give meaning to the KPIs relating to Eircom's wholesale offerings, and in accordance with Eircom's obligations of transparency, it is essential that Eircom publish its KPIs for the equivalent self-supplied products. As such, for the purpose of comparison and in accordance with Regulation 10 of the Access Regulations and 18(1)(d) of the Authorisation Regulations and section 6.1 of the General Authorisation, ComReg proposes to also publish, pursuant to Regulation 17(11) of the Framework Regulations, the KPIs to ensure that the information contributes to an open and competitive market.⁷²⁶

⁷²⁵ On a publically available website.

⁷²⁶ Response to Consultation and Decision on the Introduction of Key Performance Indicators for Regulated Markets, Document Number 11/45, Decision D05/11, 29 June 2011, paragraph 5.41, page 60.

9.269 ComReg's preliminary view is that as it is giving consideration in this Further Consultation to existing metrics required of Eircom, this proposed obligation is proportionate, as ComReg is collating information already provided and seeking further information that it considers is required for the purposes of aiding an open and competitive market. Therefore, the proposals in this consultation are justified and in line with ComReg's obligations and functions in Sections 10 and 12 of the Act.

9.270 Eircom currently publish its Leased Line (MI WHQA) quarterly KPI report⁷²⁷ with the following classification:

- (a) **Table 6:** Terminating Segments of Leased Lines (NGN Ethernet Supply) KPIs;
- (b) **Table 8:** Terminating Segments of Leased Lines (NGN Ethernet Order Designation) KPIs; and
- (c) **Table 9:** Terminating Segments of Leased Lines (Fault Repair) KPIs [9.1 Leased Line; 9.2. NGN Ethernet];

9.271 ComReg proposes that Eircom now publish its Leased Line (MI WHQA) quarterly KPI report with the following classifications:

- (a) **Table 5:** Terminating Segments of Leased Lines (MI WHQA Supply) KPIs – Zone B MI WHQA Market versus the corresponding set of KPIs relevant to Zone A MI WHQA and retail HQA Market;
- (e) **Table 6:** Terminating Segments of Leased Lines (MI WHQA Supply) KPIs – Zone B MI WHQA Market versus the corresponding set of KPIs relevant to Zone A MI WHQA and retail HQA Market;
- (f) **Table 7:** Terminating Segments of Leased Lines (Fault Repair) KPIs – MI WHQA faults associated with the Zone B MI WHQA Market versus the corresponding set of KPIs relevant to Zone A MI WHQA and retail HQA Market;
- (g) **Table 8:** Terminating Segments of Leased Lines (MI WHQA Interconnection Supply) KPIs -
 - (i) Zone A MI WHQA Market versus the corresponding set of KPIs relevant to Zone A of the retail HQA Market; and

⁷²⁷ <http://www.openeir.ie/kpis/>.

- (ii) Zone B MI WHQA Market versus the corresponding set of KPIs relevant to Zone B of the retail LL Market⁷²⁸.
- (h) **Table 9:** Terminating Segments of Leased Lines (MI Interconnection WHQA Order Designation) KPIs –
 - (i) Zone A MI WHQA Market versus the corresponding set of KPIs relevant to Zone A of the retail LL Market; and
 - (ii) Zone B MI WHQA Market versus the corresponding set of KPIs relevant to Zone B of the retail LL Market.
- (i) **Table 10:** Terminating Segments of Leased Lines (MI WHQA Interconnection Fault Repair) KPIs –
 - (i) Zone A MI WHQA Market versus the corresponding set of KPIs relevant to Zone A of the retail LL Market; and
 - (ii) Zone B MI WHQA Market versus the corresponding set of KPIs relevant to Zone B of the retail LL Market.

9.272 Pursuant to Regulation 9(3) of the Access Regulations, ComReg also notes that it may issue directions requiring Eircom to make changes or amendments to its SLAs, the LLRO (and its associated documents), LLRO Price List, LLRO Change Matrix or LLRO Price List Change Matrix to give effect to obligations imposed by this Decision Instrument and to publish such documents with such changes. In accordance with Regulation 18 of the Access Regulations, ComReg may also issue directions to Eircom from time to time requiring it to publish information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use and prices.

9.273 Eircom is also to be required to publish KPIs on its publicly available wholesale website. The specification of the content of the KPIs shall be in accordance with the obligations set out in the 2011 KPI Decision (as may be amended from time to time). Pursuant to Regulations 8, 9 and 18 of the Access Regulations, the sections of Annex 4 of the Decision Instrument contained in the 2011 KPI Decision titled “Metrics associated with Supply of Services”, “Metrics associated with Designation of Service Orders” and “Metrics associated with Repair of Services” are to be withdrawn and replaced as outlined in section 17.12 of the Decision Instrument in Appendix: 4 of this Further Consultation.

⁷²⁸ A MI LL for retail customers is classified as both Access and Interconnection.

- 9.274 Pursuant to Regulations 8, 9 and 18 of the Access Regulations, Tables 5, 6, 7, 8 and 9 of Appendix 2 of the Decision Instrument contained in the 2011 KOPI Decision will also be withdrawn and replaced with tables 5, 6, 7, 8, 9 and 10 as outlined in section 17.13 of the Decision Instrument in Appendix: 4 of this Further Consultation.
- 9.275 Eircom shall also make publicly available on its wholesale website all SLAs (and any updates thereto) relating to the provision of the products, services and facilities that are to be provided in accordance with Sections 14 and 15 of this Decision Instrument.
- 9.276 As noted above in the context of Access obligations⁷²⁹, given the amended requirement to include committed service levels within SLAs, ComReg has proposed to remove the requirement to concerning Performance Metrics. Eircom is to be required, on a quarterly basis⁷³⁰, to publish on its publicly available wholesale website, a report that evidences actual performance achieved in respect of all Undertakings on an aggregate basis in comparison to the committed service levels contained in the relevant SLA for MI WHQA products, services and facilities. Eircom is also to be required to include in the report the methodology and a description of the source data used to determine the actual performance achieved. The report is also to describe how the source data was processed by Eircom and include worked examples as to how the processed source data relates to the actual performance achieved.
- 9.277 Committed service levels form a key part of the SLAs offered by Eircom as they set out the target performance levels that Eircom commits to achieve across a range of process points for the products in question. ComReg has therefore proposed above that a specific transparency obligation should be applied to the publication of Eircom's performance with respect to the committed service levels set out in its SLAs. This will provide an Access Seeker with sufficient information to allow it to compare the level of service they are receiving from Eircom, with respect to the committed service levels in the relevant SLAs, in comparison to the aggregate performance experienced across the industry.
- 9.278 The justification for such requirements is that it is considered by ComReg to be an effective way of providing transparency regarding the service levels provided by Eircom, having regard to its access, non-discrimination and other obligations.

⁷²⁹ See Section 9.5.1 above.

⁷³⁰ Showing the monthly performance for the previous three months,

9.279 Where Eircom considers certain aspects of information to be provided under the obligations set out in this Section 17 to be of a confidential and/or commercially sensitive nature, Eircom shall, without delay, provide ComReg with complete details of such information along with objective reasons justifying why it considers that information is confidential and/or commercially sensitive. ComReg will consider the information in accordance with ComReg Document No. 05/24. If ComReg considers that the information is not confidential and/or commercially sensitive, it shall be published by Eircom in accordance with its obligations under this Section.

9.280 This KPI remedy is justified as it provides confidence to Access Seekers that Eircom's performance in the supply of MI WHQA products, services and facilities in Zone B will be measured against relevant performance indicators in a transparent way and therefore supports the non-discrimination and access obligations.

Transparency requirement to facilitate the legitimate sharing of confidential and/or commercial information through a non-disclosure agreement

9.281 ComReg also considers that Eircom, as the proposed SMP operator in the Zone B MI WHQA Market should be required to provide information regarding technical developments, network rollout and wholesale services, insofar as it affects the provision of MI WHQA products, services and facilities in Zone B (subject to the proposed obligations set out in this Consultation) and to do so with sufficient visibility to ensure that Access Seekers are in a position to prepare business or operational plans.

9.282 In this respect, ComReg would note that in some cases circumstances may arise where Eircom considers that certain information to be provided by it pursuant to its non-discrimination obligations is of a confidential and/or commercially sensitive nature. To cater for such circumstances, ComReg proposes to require Eircom to meet the following requirements, which largely mirror those which have been recently imposed in other markets within which Eircom has SMP.

- (a) Eircom shall, without delay, provide ComReg with complete details of such information along with objective reasons justifying why it considers it is confidential and/or commercially sensitive. ComReg will consider the information in accordance with its Confidentiality Guidelines⁷³¹ as relevant or otherwise. If ComReg considers that the information is not confidential and/or commercially sensitive, it shall be published by Eircom in accordance with its obligations proposed in this paragraph (including the subsections).
- (b) If ComReg concludes that the information in (a) above is confidential and/or commercially sensitive, Eircom shall publish general details which of itself is not considered confidential as to the nature of such information and shall make it available to an Access Seeker that has signed a Non-Disclosure Agreement ('**NDA**') the terms and conditions of which shall be fair, reasonable and non-discriminatory. The NDA shall also be published on Eircom's publicly available website. Any confidential and/or commercially sensitive information shall not be made available by Eircom to its downstream operations until such time as it is made available to an Access Seeker, or as otherwise agreed with ComReg.
- (c) If and when the commercially sensitive and/or confidential information becomes no longer commercial sensitivity and/or confidential, it shall be made available by Eircom on its publicly available wholesale website without undue delay and without the need for an NDA to be signed.

9.283 This obligation is considered necessary to ensure that Eircom cannot circumvent compliance with its access, non-discrimination and transparency obligations on the grounds that it considers that certain information is commercially sensitive and/or confidential.

Proposed Transparency requirement with respect to Product Development

9.284 Pursuant to Regulation 9 of the Access Regulations ComReg is proposing to oblige Eircom to provide additional information to Access Seekers with respect to the development of regulated products, services or facilities.

⁷³¹ See "Guidelines on the treatment of confidential information" ComReg Document 05/24, March 2005.

- 9.285 ComReg is of the view that there are many reasons for and benefits to imposing transparency remedies on Access Seekers found to have SMP in particular markets. The current suite of transparency obligations provide a reasonable degree of visibility to Access Seekers with respect to network characteristics and technical standards, interconnect facilities and products, services and facilities.
- 9.286 However, Eircom's wholesale regulated products and services continue to develop and evolve, and ComReg considers that transparency in relation to these developments is particularly important for the promotion of competition.
- 9.287 Currently, Eircom, on its own initiative or on receipt of requests from Access Seekers or its downstream arm for a new product or an enhancement to an existing product, may undertake product or process development. The content, timing, speed and communications regarding such developments is of critical importance to Access Seekers.
- 9.288 Access Seekers need to be able to clearly understand, in a timely manner, the changes or new developments proposed and be able to input into the decisions regarding prioritisation of particular developments. Prioritisation of product development resources by Eircom is a key concern for Access Seekers, particularly in situations where demand for Eircom development resources is greater than that which is available. Access Seekers need to be able to input in the decision making process with respect to how developments are prioritised by Eircom.
- 9.289 Access Seekers should be given an opportunity, at an early stage of a proposed development, to provide their views as to the priority of the development. Access Seekers must have their priorities fully taken into account by Eircom when decisions with respect to product development resourcing are being made.
- 9.290 ComReg is also of the view that Eircom should publish the process and criteria used by Eircom in deciding on the prioritisation of product developments.
- 9.291 Access Seekers also need to be able to plan for the introduction of new products, services or facilities and therefore need information, with a reasonable degree of certainty, regarding the characteristics, timing and the availability of developed products, services or facilities.
- 9.292 ComReg has proposed, as described in paragraphs 9.183 to 9.202, timelines which Eircom must meet throughout its product development process. In addition, ComReg is of the preliminary view that a greater degree of transparency is required with respect to the product development process currently followed by Eircom.

9.293 ComReg is, therefore, proposing additional transparency obligations which are designed, as far as possible, to ensure that Access Seekers:

- (a) have sufficient knowledge relating to the contents of proposed product developments;
- (b) have the ability to input into the prioritisation of developments and to understand the criteria and process used by Eircom for prioritising developments; and
- (c) are made aware of the proposed launch dates of any new products or changes to existing products.

9.294 In accordance with Regulation 9 of the Access Regulations ComReg is proposing the following obligations.

9.295 Eircom shall publish and keep updated, on its publicly available website⁷³², a description of its product development process, including a description of all process steps and activities, identifying all key milestones and decision points, starting from the receipt of a request from an Access Seeker, through to the launch of a new or changed wholesale product, service or facility.

9.296 For each proposed development, Eircom shall, at the earliest possible time but in any event not later than fifteen (15) working days after the receipt of an access request for the development of a product, service or facility in a regulated market, provide and keep updated on its publicly available website a Product Development Roadmap⁷³³ listing all of the accepted access requests⁷³⁴ with the following details for each proposed development:

- (a) a unique identifier for each access request;
- (b) a description of each access request including a copy of or links to all documents relevant to each request;

⁷³² Appropriately secured such that only Access Seekers that have signed a Reference Offer ('RO') can get access to this information.

⁷³³ A Product Development Roadmap is a list of all proposed future developments for a particular product family.

⁷³⁴ An accepted access request is a request deemed by Eircom to be related to a product service or facility in the WLA market. An Access Request can be made by an Access Seeker or by Eircom.

- (c) the milestones and associated target dates to develop and launch each proposed product, process or service. Eircom shall inform Access Seekers of any changes to such target dates at the earliest point in time after the need for such changes are identified by Eircom;
- (d) a method for tracking the progress of developments against those dates;
- (e) Eircom must identify the proposed date, and communicate it to Access Seekers, by which Access Seekers can notify Eircom of the degree of priority to be given to each particular development;

9.297 In addition, Eircom shall publish the following information (the publication deadlines proposed here correspond to those set out in the proposed access obligation on product development described in paragraphs 9.183 to 9.202):

- (a) For each access request received by Eircom and accepted by Eircom as being in a regulated market Eircom shall, at the earliest possible time, but not later than fifteen (15) working days after the receipt of the access request, advise all Access Seekers that the request has been received and provide them with information regarding the request;
- (b) The information provided to Access Seekers should include a unique reference number which will allow tracking of the request and all known details relevant to the request including but not limited to a copy of the request, where a written request has been made, and in all cases a description of the key features and functionality requested;
- (c) Not later than thirty (30) working days, unless otherwise agreed with ComReg, after receipt of the access request, Eircom shall agree with the Access Seeker an accurate description of the requirement(s) and shall publish a description of the requested product or service on its publicly available website;

- (d) Within eighty five (85) working days, unless otherwise agreed with ComReg, confirm in writing to Access Seekers whether it agrees to provide the requested new or amended product, service or facility. Where the request is refused, Eircom shall comply with its obligations to give written reasons for its decision at the time of refusal. In addition, Eircom shall advise all other Access Seekers when the request has been refused and give written reasons for its decision to refuse to meet the request, at the time of refusal, to all other Access Seekers. If Eircom do not intend to fully meet the requirement(s) (i.e., where, for example, Eircom agree to the development but some elements of the requirement are not being met) Eircom should make Access Seekers aware of this within eighty five (85) working days. The relevant details such as the objective reasons for any divergence from the original request shall also be documented and provided by Eircom to Access Seekers within eighty five (85) working days. Eircom shall in addition within eighty five (85) working days, identify the degree of priority relative to all other developments, including Access requests and amendments proposed by Eircom, of regulated products, services or facilities in the Relevant Market that it proposes to assign to each proposed development.
- (e) In addition, Eircom will for each such development provide Access Seekers with all other relevant documentation including but not necessarily limited to any revised industry process manual, price lists or technical manuals;
- (f) At all stages of the wholesale product development process Eircom shall make publicly available and keep updated on its website, all relevant documentation describing the product or service which will be delivered by each development in sufficient detail such that an operator could reasonably be aware of the key features and functionality proposed, the proposed geographic reach of the product and any relevant limitations of the product.
- (g) Eircom shall provide and keep updated on its publicly available website a Product Development Roadmap listing all of the accepted access requests including the priority given by Eircom to the development of each request relative to other developments of regulated products, services or facilities within the MI WHQA Market. Eircom shall update its Product Development Roadmap with the priority given by it to a request within 85 working days of receipt of such a request.
- (h) Eircom shall publish the prioritisation process and the criteria used by it with respect to the prioritisation of product developments with respect to each other. Eircom shall objectively justify to Access Seekers any reprioritisation of a request that may occur from the time of its initial request until its launch.

- (i) Eircom shall provide and keep updated on its publicly available website a Product Development Roadmap that includes a method for tracking the progress of developments against the Milestones and associated target dates to develop and launch each proposed product, process or service.
- (j) Provide any other information as may reasonably be required by ComReg for the purposes of ensuring transparency.

Proposed Transparency requirement with respect to network roll out

9.298 Pursuant to Regulation 9 of the Access Regulations ComReg is proposing to impose an obligation on Eircom requiring it to make public information with respect to the planned roll out of MI WHQA networks.

9.299 Eircom has an existing obligation⁷³⁵ to provide to OAOs with information which is required to support existing and future products, services and associated facilities in the market in an accurate and timely manner, further to a reasonable request for such information from an OAO. For the avoidance of doubt this also applies to new products, services or associated facilities in the Market, irrespective of technology.

9.300 On a monthly basis, Eircom is providing information currently with respect to the roll out of MI WHQA NGN Ethernet⁷³⁶. ComReg is of the view that this information⁷³⁷ continues to be key to Access Seekers planning, execution and timing of access and/or interconnection (products and services). It is ComReg's preliminary view that the availability of such information is important for the development of competition as it is a key input into Access Seekers business planning.

9.301 For example, in the context of an Access Seeker planning to offer services in an area or areas where the Access Seeker has not previously had a presence, then consideration of Access and Interconnection is a key element in the planning process. Therefore, it is ComReg's preliminary view that in order to ensure competition, information with respect to MI WHQA to a sufficient degree of granularity that allows Access Seekers to plan to offer new services needs to be made available to Access Seekers in a timely, efficient, transparent and non-discriminatory manner.

⁷³⁵ 2008 Decision, Appendix A: Decision Instrument Section 8.3.

⁷³⁶ WEIL-WSEA_NGN_Node_Rollout_plan_V10.6_Final for Jan-18.xls, Version 10.6, 8 January 2018.

⁷³⁷ Information with sufficient detail as contained in Open eir January 2018 NGN Ethernet rollout plan: WEIL-WSEA_NGN_Node_Rollout_plan_V10.6_Final for Jan-18.xls, Version 10.6, 8 January 2018.

9.302 ComReg is of the view that information regarding the rollout of WDM services is equally as important to Access Seekers as this information is similarly key to the planning, execution and timing of access and/or interconnection and to business planning.

9.303 ComReg's preliminary position is that Eircom shall, in particular, make this information available on its publically available wholesale website⁷³⁸. In summary, Eircom shall

- (a) (unless otherwise agreed by ComReg) publish, on its publically available website - at least three months in advance - any proposed changes to the MI WHQA⁷³⁹ rollout plan;
- (b) publish on its publically available wholesale website, the MI WHQA rollout plan within the first ten (10) calendar days of each month; and
- (c) publish the MI WHQA rollout plan with sufficient detail⁷⁴⁰ to allow Access Seekers to determine
 - (i) Active MI WHQA nodes;
 - (ii) The services offered at each MI WHQA node;
 - (iii) Planned MI WHQA nodes (including forecast dates);
 - (iv) The services to be offered at each planned MI WHQA node.

9.304 The proposed remedy is considered reasonable and proportionate given that Eircom is already providing information currently with respect to the roll out of MI WHQA NGN Ethernet. Therefore, providing the additional information on Eircom's MI WHQA WDM rollout plans to Access Seekers does not create an unreasonable burden on Eircom, having regard to its objectives.

Summary of Preliminary Conclusions on Transparency Obligations

9.305 Having regard to the analysis set out in paragraphs 9.223 to 9.283 above, ComReg's preliminary view is that proposed transparency obligations are proportionate and justified.

⁷³⁸ Appropriately secured such that only Access Seekers that have signed the LLRO can get access to this information.

⁷³⁹ Including NGN Ethernet and WDM.

⁷⁴⁰ Information with sufficient detail as contained in Open eir January 2018 NGN Ethernet rollout plan: WEIL-WSEA_NGN_Node_Rollout_plan_V10.6_Final for Jan-18.xls, Version 10.6, 8 January 2018.

9.306 ComReg's preliminary view is to continue the imposition of a Transparency obligation on Eircom in the Zone B MI WHQA Market by introducing an:

- (a) Obligation to publish and maintain a LLRO;
- (b) Obligation to publish and maintain a Network Price list for the products in scope;
- (c) Obligation to publish changes to the LLRO and wholesale prices, in advance of their coming into effect, and to notify ComReg in advance of publication;
- (d) Obligation to publish KPIs subjects to the amendments outlined above;
- (e) Obligation to publish an SLA;
- (f) Requirements governing sharing of confidential and/or commercial information through a non-disclosure agreement;
- (g) Requirements with respect to transparency of product development; and
- (h) Requirement with respect to the provision of information concerning network roll out plans.

9.5.4 Price Control Remedies in the Zone B MI WHQA Market

Overview

9.307 ComReg's preliminary view as set out in this Further Consultation, is that a price control obligation of cost orientation should apply with respect to terminating segment products, services and facilities in the Zone B MI WHQA Market, based on the derivation of cost oriented tariffs for MI PPC products. This view is based on the fact that the terminating segment product is the principle wholesale input required to replicate a MI retail leased line product. The provision of cost orientated wholesale inputs to Access Seekers, means that they can emulate a retail offering and compete in downstream and in other related markets which rely on such inputs.

9.308 In summary, ComReg is of the preliminary view, supported by the rationale laid out in the remainder of this section, that the appropriate approach to price control in the Zone B MI WHQA Market with respect to MI terminating segments products, services and facilities is through the application of cost oriented tariffs for MI terminating segments⁷⁴¹ and associated WEILs (Wholesale Ethernet Interconnection links), detailed earlier in this Section 9 concerning Access Obligations.

9.309 In addition, ComReg proposes that the connection charges for such products be cost oriented, based on the likely costs incurred by Eircom, adjusted for efficiencies, plus a regulated rate of return (based on the WACC rate). The adjustment for efficiencies will ensure that Eircom is unable to recover any inefficiently incurred costs.

9.310 The following paragraphs consider the mechanisms required to establish such a price control obligation in the Zone B MI WHQA Market under the following headings:

- (a) Appropriate Form of Price Control (discussed in paragraphs 9.311 to 9.343 below)
- (b) Appropriate Costing Methodology (discussed in paragraphs 9.344 to 9.358 below)
- (c) Appropriate Cost Standard - Historic Costs or Current Costs (discussed in paragraphs 9.361 to 9.370 below)
- (d) What are the appropriate Cost Models? (discussed in paragraphs 9.371 to (b) below)
- (e) Pricing Approach (discussed in paragraphs 9.386 to 9.387 below)
- (f) Duration of the price control (discussed in paragraph 9.388 below)

Appropriate Form of Price Control

9.311 This section assesses the various potential forms of price controls available and whether the current form of price control for PPC products in the Zone B MI WHQA Market above remains appropriate over the period of this review.

⁷⁴¹ Terminating segments are the infrastructural component used to connect the actual end user or retail customer's location, to the point of interconnection between the incumbent's network and the point of interconnection to the service provider contracted to the retail user.

9.312 There are a number of price control options available to ComReg, for the PPC products in the Zone B MI WHQA Market. The relevance and appropriateness of each are discussed below under the following headings:

- (a) **Option 1:** Regulatory Forbearance;
- (b) **Option 2:** Benchmarking;
- (c) **Option 3:** Retail Minus;
- (d) **Option 4:** Margin Squeeze Test; and
- (e) **Option 5:** Cost Orientation

Option 1: Regulatory Forbearance

9.313 This option would mean that there would be no price control obligations imposed on the SMP operator and it would be free to set prices for terminating segment products in the Zone B MI WHQA Market, and related services and facilities. In this situation, ComReg would have no influence over, for example, the monthly rental prices charged for such products.

9.314 Therefore, ComReg is of the preliminary view that Regulatory Forbearance is not an appropriate approach to set prices for terminating segment products in the Zone B WHQA Market.

Option 2: Benchmarking

9.315 Benchmarking is the process whereby the price of terminating segment products in the Zone B MI WHQA Market and related services and facilities would be set by reference to the price of a comparable service in other countries. Regulation 13 (3) of the Access Regulations states in relation to benchmarking that:

“The Regulator shall ensure that any cost recovery mechanism or pricing methodology that it imposes under this Regulation serves to promote efficiency and sustainable competition and maximise consumer benefits. In this regard, the Regulator may also take account of prices available in comparable competitive markets”

9.316 This approach tends to be adopted by NRAs, when there is an absence of sufficient data (e.g. on costs, volumes, etc.), to allow the NRA to arrive at a suitably informed price. This is however not the case with the costs associated with infrastructure elements used with the delivery of terminating segment MI leased line products. ComReg, with the assistance of external consultants has already undertaken extensive modelling of cost and volume data in relation to access fibre cables used in the delivery of such services, but also the use of the next generation Core Ethernet network by a range of services including MI leased line products. These models are further detailed in paragraphs 9.348 to 9.380 of this document. Such cost models are considered by ComReg to be robust and effective BU-LRAIC+ cost models which are representative of the appropriate and efficient costs incurred by Eircom.

9.317 Therefore, ComReg is of the preliminary view that benchmarking is not an appropriate approach to set prices for terminating segment products in the Zone B MI WHQA Market.

Option 3: Retail Minus

9.318 In general, a retail minus price control determines the appropriate margin between the wholesale charge and the related downstream retail prices by considering what proportion of retail and other downstream costs would need to be deducted from the retail price in order to be left with the appropriate wholesale price at which competitors, reliant on upstream (wholesale) input, can effectively replicate the retail offer of the downstream arm of the Service Provider considered to have SMP.

9.319 A significant advantage of a retail minus price control is that it is comparatively easy to implement, as there is no need to develop a detailed cost model of the network required to supply the relevant wholesale LL product tariffs. Even setting the retail margin with reference to the SMP Undertaking's retail costs requires significantly less cost data than constructing a network cost model.

- 9.320 However, ComReg has already developed cost models to set cost oriented prices for terminating segment products in the collective MI WHQA Markets, which consists of the Zone A WHQA Market and Zone B MI WHQA Market. These models can be readily revised and updated to reflect changes in costs and volumes since the last market review. Indeed the revision to the Copper Access Model (**‘Revised CAM’**) and its assessment of access fibre cable costs, was recently detailed in Chapter 5 of ComReg’s 2016 Wholesale Fixed Access Services Pricing Decision⁷⁴², and will assist Eircom in the review of cost orientation for the WSEA Physical component of terminating segment MI products in the Zone B MI WHQA Market.
- 9.321 In addition, the 2012 Pricing Decision detailed the Core Network NGN Cost model which determined the cost orientation for the leased line use of the core network. Furthermore, the recent review of the **‘NGN Core network cost model’** in the context of the recent consultation in ComReg Document 17/26⁷⁴³, relating to markets 3a and 3b (the WLA and WCA markets), also provides an updated perspective on the costs for the WSEA Logical cost component of PPC MI WHQA products.⁷⁴⁴ As such, both of these models will assist Eircom in the review of cost orientation for the WSEA Logical cost component of PPC MI WHQA products.⁷⁴⁵
- 9.322 Moreover, a retail minus pricing policy based on the exclusion of specific retail costs from existing retail product prices could potentially give rise to an inflated estimation of the costs of wholesale inputs.
- 9.323 This issue could also exert an even greater bias in relation to terminating segment products which are not customer to customer solutions, but depend on Access Seekers leveraging their network investments to replicate a retail offering.
- 9.324 Further regulation remedies such as a retail minus price control that previously applied to WLLs were removed in the past, and only a margin squeeze applied between retail product prices and the costs of wholesale inputs, as outlined in the 2012 Pricing Decision. The test of sufficient margin did not set an absolute price level from which to calculate a simple retail minus wholesale price.

⁷⁴² See footnote 454.

⁷⁴³ ComReg consultation and draft Decision 17/26 ‘Pricing of wholesale services in the Wholesale Local Access (WLA) market and in the Wholesale Central Access (WCA) markets: Further specification of price control obligations in Market 3a (WLA) and Market 3b (WCA)’.

⁷⁴⁴ Known as the NGN Core model in ComReg Document 17/26.

⁷⁴⁵ See paragraph 9.383 below for more details.

9.325 Based on these considerations, ComReg is of the preliminary view that retail minus price controls are not an appropriate approach to set prices for terminating segment MI WHQA products or related services and facilities, in the Zone B MI WHQA Market.

Option 4: Margin Squeeze Test

9.326 A margin squeeze can occur where a vertically integrated Service Provider with SMP at the wholesale level sets wholesale prices such that given the prevailing retail prices it does not allow retail competition to cover its retail costs (e.g., sales, marketing, etc.). This will therefore be likely to foreclose entry to downstream markets.

9.327 Similarly, Eircom could set its downstream retail prices at a level such that a Similarly Efficient Operator ('SEO') may not recover the downstream retail costs that it incurs after acquiring the essential wholesale inputs from the SMP provider's wholesale business arm. This outcome would ultimately prevent the SEO from competing effectively in the retail market with the SMP provider. This again could foreclose existing competition and prevent potential future entry.

9.328 In the medium to the long-term this would be to the detriment of competition and end-users.

9.329 A margin squeeze test ascertaining the price of the wholesale input that would allow the SEO to compete at the retail level can be set between retail and wholesale products and/or between different wholesale products.

9.330 A retail margin squeeze test compares the retail revenues with the retail and wholesale costs to see if the margin is positive or negative. If there is a negative margin the wholesale price and/or retail price may have to change.

9.331 Similarly, a margin squeeze test between retail and wholesale products ensures economic replicability at each layer of the value chain; with adequate economic space between each layer. A well-constructed margin squeeze test can ensure that a, deeply interconnected SP can reap the benefits of its network investments, while providing an important competitive constraint on the SMP provider along the value chain, in both wholesale and retail markets.

9.332 A margin squeeze test can be used as a price control obligation to set maximum wholesale prices or as a complementary test in conjunction with other regulatory tools (e.g., cost orientation).

- 9.333 Currently, a margin squeeze test is applied to set a floor on end-to-end wholesale leased line prices based on the costs of wholesale terminating segment inputs and associated interconnect facilities costs, combined with the costs of an SEO with 25% market share (who is recovering costs for the use of its own infrastructural networks investments). These inputs are required to emulate an end-to-end, customer to customer LL product offering, and the summary wholesale costs faced by an SEO SP in providing the end to end WLL (wholesale leased Line) MI product.
- 9.334 The effective application of a Margin Squeeze Test is most efficient when its operation is based on the delineation of a market where an SP has SMP in a national market or where the geographic market boundaries are well defined. In relation to the existing Margin Squeeze Test which applies for all retail MI products, the advent of the proposed deregulation of the Zone A MI WHQA Market, results in a significant share of the MI customer base services now being outside the scope of regulation and therefore, Eircom, no longer facing the requirement to meet margin squeeze obligations. This is likely to undermine the effectiveness of such a test. Currently many retail tenders bid for by Eircom and other SPs will reflect a mix of demands for wholesale MI products in both the Zone A MI WHQA Market and Zone B MI WHQA Market. As no ex ante obligations will apply to the provision of services in the Zone A MI WHQA Market, the absence of margin obligations, will permit bidders to significantly alter prices in that market. As a result, within a tender bid with a mixed portfolio of wholesale MI products spread across the Zone A MI WHQA Market and Zone B MI WHQA Market, it can be possible for a provider to bid for the overall tender by meeting the cost orientation of those products provided in the Zone B MI WHQA Market, but to compensate by materially discounting the tariffs for those products which are in the Zone A MI WHQA Market and no longer regulated. As the retail tender is normally submitted with wholesale inputs from both markets, the pricing latitude given to a supplier submitting such a tender is quite wide. This calls into question the efficacy of retaining a Margin Squeeze Test. As such, given that supply and demand for MI WHQA will occur in a mix of two geographic markets, ComReg is of the preliminary view that a Margin Squeeze Test is not considered appropriate.

Option 5: Cost Orientation

- 9.335 A cost orientation obligation means that the SMP operator has to ensure that its wholesale prices recover no more than its actual incurred costs adjusted for efficiency plus a reasonable rate of return.

- 9.336 The setting of cost oriented maximum prices for terminating segment MI WHQA LL products, services and facilities, including related ancillary services is consistent with ComReg's statutory objectives under Section 12 of the Communications Regulation Act, 2002 and Regulation 16 of the Framework Regulations (as amended). It is envisaged that this should facilitate greater regulatory certainty and avoid the risk of excessive pricing as identified in Section 8 of this Further Consultation.
- 9.337 As set out in paragraphs 9.320 and 9.321 above, a number of BU-LRAIC+ cost models were developed by ComReg with the assistance of its external consultants, which are being used to determine the costs and maximum charges relating to terminating segments of NGN Ethernet or MI LL products.
- 9.338 The primary cost model in use for the determination of WSEA Logical tariffs is the Core Network NGN Cost model detailed in the 2012 Pricing Decision. Furthermore, in relation to these costs, the NGN Core network cost model detailed in ComReg Document 17/26 provides a more recent perspective on the costs incurred by WSEA Logical paths required to transition the core network. Thus, this NGN Core network cost model which contains up to date costs and volumes associated with MI WHQA LL products, services and facilities, provides the means for Eircom to determine cost oriented tariffs for Zone B MI WHQA products.
- 9.339 Furthermore, as noted above in paragraph 9.321, more recent access fibre cable cost modelling results are also available consequent to ComReg's 2016 Wholesale Fixed Access Services Pricing Decision.
- 9.340 Additionally, separate BU-LRAIC+ cost models were used to establish cost oriented prices for WEILs in the 2012 Pricing Decision and are also available as a resource to update costs and associated prices as appropriate.
- 9.341 Furthermore, for the ancillary products/services, Eircom is obliged to comply with the cost orientation obligation contained in the 2012 Pricing Decision, to ensure that the charges are cost oriented and that it only recovers the efficiently incurred costs and a regulated rate of return. As such, the pre-existing methodology for costing ancillary services can be revised to re-examine any revision of their cost oriented tariffs

9.342 Hence, ComReg is of the preliminary view that a cost orientation obligation (inclusive of the WACC) is justified to set maximum price levels for wholesale terminating segments which are MI WHQA LL products in the Zone B MI WHQA Market, including services and facilities, and related WEILs. This obligation is intended to minimise the risk of excessive pricing and preclude the risk of a vertically-integrated operator with SMP in the wholesale market from being able to exploit its position, by charging an excessive price for wholesale inputs and so over recovering its costs.

Preliminary Conclusion on form of price control

9.343 For the reasons set out above, ComReg's preliminary view is that Eircom should be subject to an obligation of Cost Orientation with respect to products, services and facilities to be provided pursuant to its obligations in the Zone B MI WHQA Market.

Appropriate Costing Methodology

Overview

9.344 After proposing that a Cost Orientation price control obligation is appropriate, the next issue to be addressed is to ascertain the correct costing methodology to be applied. The costing methodology determines the costs that should be included in any cost model and how this is converted into a unit price.

9.345 When considering the options available to ComReg in determining the most appropriate costing methodologies, such as developing cost models to establish cost oriented tariffs, there is a need to ensure compliance with the price control obligations for products, services and associated facilities in the Zone B MI WHQA Market. There is also a need to balance a number of objectives, including the promotion of competition; incentivising infrastructure investment; ensuring appropriate cost recovery for Eircom; and ensuring the interests of end-users are protected.

9.346 ComReg is of the preliminary view that effective competition in the downstream markets that rely on inputs from the Zone B MI WHQA Market, would be best served by applying price ceilings on wholesale inputs required to provide retail equivalents. In effect, cost orientated tariffs for the wholesale terminating segments should be established, and they in turn should be set as maximum wholesale price levels. This, in turn, avoids the risk of excessive price levels for such wholesale inputs.

- 9.347 In order to protect the interests of end-users, retaining cost orientated tariffs for terminating segment MI wholesale inputs in the Zone B MI WHQA Market, creates the conditions to facilitate the development of effective downstream competition. Other Access Seekers can purchase cost based wholesale inputs to compete in downstream retail markets. This, in turn, provides end-users with the opportunity to purchase services from a range of SPs with differentiated prices in the retail market.
- 9.348 In determining an appropriate costing methodology the following needs to be considered;
- (a) What is the appropriate cost standard?
 - (b) Whether historic costs or current costs should be used?
 - (c) What are the appropriate Cost Models? Whether a Top Down ('TD'), bottom up ('BU') or hybrid model approach should be applied?

Appropriate Cost Standard

- 9.349 Cost standards refer to the method by which costs are allocated to services with the objective of allowing the operator to recover all the efficiently incurred costs associated with its network.
- 9.350 Certain assets and resources can be traced directly to a specific product/service and can, therefore, be considered as direct costs which are attributable to a specific product/service. However, other assets and resources that can be used by many different products/services require allocation rules to share such costs amongst the range of products/services that these assets and resources support. Costs can be generally categorised as follows:
- (a) **Common network costs:** costs that in general are not attributable to any product/service (e.g. costs incurred across the whole organisation regardless of the product or service provided, so the costs cannot be directly attributed to a particular product or service. Examples include general finance function costs, CEO salary, regulatory licence fees, redundancy and voluntary severance costs);
 - (b) **Joint costs:** costs that are variable and incurred by some, but not all products/services, but cannot be directly attributed to one particular product/service (e.g. cable and trench costs for core network connectivity providing a highway for traffic for a range of services, such as broadband and LLs, but not attributable to local access services such as Local Loop Unbundling); and

- (c) **Corporate overheads:** costs that cannot be allocated to products/services using a specific allocation method (e.g. the costs of the chief executive's office would be allocated to all services).

9.351 The options available to ComReg in terms of the costing methodologies for the purposes of a price control typically involve the following:

- (a) Average Variable Cost ('**AVC**');
- (b) Average Avoidable Cost ('**AAC**');
- (c) Long Run Average Incremental Cost ('**LRAIC**');
- (d) LRAIC plus; or
- (e) Average Total Cost ('**ATC**').

9.352 Each of the above cost methodologies is discussed below.

Average Variable Cost

9.353 AVC approximates to the variable cost of producing an additional unit of output. However, it does not consider fixed costs, which can be a significant cost component faced by operators. ComReg, as a result, is of the preliminary view that the application of this cost standard, when used to establish wholesale product prices could prevent new market entrants and existing operators from recovering their investment costs. This, in turn, would significantly constrain the potential for entry by efficient entrants and could also lead to an exit of existing infrastructure based operators, including the incumbent itself, who cannot sustain a strategy that may, for example, involve long term losses.

Average Avoidable Cost

9.354 AAC are the short-run avoidable variable and incremental fixed costs of the additional sales of the product/service under review. The inclusion of short run fixed costs, distinguishes the AAC approach from the AVC approach. Furthermore, the exclusion of a mark-up for overall fixed and common retail costs, distinguishes AAC from ATC (below). As the AAC standard does not include provision for (non-avoidable) fixed costs and common costs in an ex-ante margin squeeze test, it could be argued that this provides the SMP operator with an advantage given the broad range of products and services over which it could conceivably recover such common costs. However a difficulty for an operator such as Eircom which is heavily regulated at the wholesale level is that it is unclear where these costs might be recovered without causing distortions in other markets. Furthermore it is likely that excluding long run fixed cost would be to the detriment of investment since over the long run Eircom must recover all of its costs. From the perspective of entrant operators ComReg is of the preliminary view that the decision to enter the market depends on the expectation that all fixed and common costs can be recovered at least in the long term. Cost measures such as AAC do not ensure this, as the full total costs of an operator are not covered. Thus, ComReg is of the preliminary view, that to apply an AAC cost rule in an ex ante context would be to the detriment of investment and competition overall. This would ultimately be to the detriment of end users.

9.355 SPs to recover fixed and common unavoidable costs.

LRAIC, LRAIC plus or ATC

9.356 The European Commission in its 'Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty [now Article 102 of the Treaty on the Functioning of the European Union ('TFEU')] to abusive exclusionary conduct by dominant Undertakings', noted that:

"Long-run average incremental cost is the average of all the (variable and fixed) costs that a company incurs to produce a particular product. LRAIC and average total cost (ATC) are good proxies for each other, and are the same in the case of single product Undertakings. If multi-product Undertakings have economies of scope, LRAIC would be below ATC for each individual product, as true common costs are not taken into account in LRAIC. In the case of multiple products, any costs that could have been avoided by not producing a particular product or range are not considered to be common costs. In situations where common costs are significant, they may have to be taken into account when assessing the ability to foreclose equally efficient competitors."

9.357 Given that one of the regulatory objectives of ComReg is to reward investments already made (without allowing over recovery) and thereby continue to promote infrastructure competition the only three available options that ComReg believes are consistent with its objectives in this context are LRAIC, LRAIC plus and ATC. ComReg is of the view that the differences between LRAIC, LRAIC plus and ATC are as follows:

- (a) LRAIC is the average efficiently incurred variable and fixed costs that are directly attributable to the activity concerned over the long-run. This approach does not include an apportionment for common costs. LRAIC is a forward looking approach, but does not permit an operator to recover all of its efficiently incurred costs. Significant common costs which are not directly attributable to the product in scope would be excluded under this approach and could deter an operator from entering the market due to the inability to fully recover investment costs;
- (b) LRAIC plus is the average efficiently incurred variable and fixed costs that are directly attributable to the activity concerned over the long-run, plus a mark-up for joint and common costs. This approach avoids the risk of being unable to recover investment costs associated with joint and common costs;
- (c) ATC is the average total cost and includes variable, fixed, joint and common costs based on historical cost data but with no adjustments for efficiencies. This approach considers all relevant historic costs and so may encourage inefficient investments by operators.

ComReg's preliminary view on the appropriate cost methodology

9.358 The cost models detailed in the 2012 Pricing Decision, and currently used by ComReg to determine the efficient level of terminating segments (and any interconnect costs) are based on the LRAIC plus cost standard. These models establish cost orientated maximum tariffs, relating to terminating segments and WEILs, used for the Interconnection of the aforementioned terminating segments.

9.359 ComReg is of the preliminary view that a “LRAIC plus” is the preferred cost accounting methodology⁷⁴⁶ for the setting of wholesale leased line prices in Ireland combined with a BU cost model (see below). ComReg is of the opinion that this approach based on LRAIC plus methodology mirrors the price that would prevail in a competitive market and it should send the right “build/buy” signals to new entrants⁷⁴⁷. LRAIC plus also allows the incumbent the opportunity to recover all of its efficiently incurred costs in the long term (including a rate of return) and therefore encourages efficient investment by the incumbent. Therefore ComReg’s conclusion is that a LRAIC plus cost methodology is the appropriate option for setting wholesale leased line prices. Additionally for the ancillary products/services, associated with terminating segments and interconnection products, ComReg is of the preliminary view that Eircom is obliged to comply with the cost orientation obligation. ComReg directed the cost based approach in the 2008 Decision , which was designed to ensure that such charges are cost oriented and that Eircom recovers efficiently incurred costs and a regulated rate of return.

9.360 To align with this, ComReg is proposing that Eircom utilise the BU-LRAIC+ cost models detailed in paragraphs 9.320 and 9.321 above, to determine WSEA Physical and Logical MI WHQA tariffs.

Appropriate Cost Standard - Historic Costs or Current Costs

9.361 ComReg now considers whether Historic Costs or Current Costs should be used in setting cost-oriented prices.

Historic Costs

9.362 Under the historic cost approach, an operator will recover costs that were incurred at the time of the relevant transaction in the provision of products, services or associated facilities, along with a return on investment.

⁷⁴⁶ ComReg outlined its rationale for the preference to use the BU LRAIC+ approach, rather than TD Historic Costs, in its Consultation Document 10/70, published on September 10th 2010 and in the 2011 Access and Transparency Decision.

⁷⁴⁷ The European Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU) (the ‘**2013 Non-Discrimination Recommendation**’) also supports BU LRAIC+ cost approach in this instance.

- 9.363 The historical cost accounts ('**HCA**') are based on the actual reported financial results of an operator for a particular expired period of time.
- 9.364 One of the main concerns with the HCA accounts is their lack of granularity and therefore, their suitability for modelling.
- 9.365 While HCA has the advantage in that there is no risk of an Undertaking being overpaid, the European Commission⁷⁴⁸ suggested that the use of historic costs are not appropriate for decision making of the NRA as these may include inappropriate costs, inter alia, inefficient investments.
- 9.366 ComReg is therefore of the preliminary view that the use of historic costs to derive a wholesale tariff would not send the correct signals to the market to encourage cost reductions nor would it provide other operators with a suitable benchmark for investment decisions.

Current Costs

- 9.367 The current cost approach values assets at the current market value and reflects changes in asset prices. The current cost approach is normally implemented based on the current cost accounting ('**CCA**') system of the incumbent or on the basis of a modern equivalent asset ('**MEA**') alternative approach. ComReg notes that Eircom no longer produces CCA accounts. An MEA approach reflects the costs that a hypothetical entrant would incur through investing in an alternative network. While the primary cost models detailed in the 2012 Pricing Decision are to be revised to establish cost orientation for leased line use of the core network, the NGN Core model has become available to consider changes in network structure, costs and demands since then.
- 9.368 Furthermore, the bottom up cost models developed for the 2016 Wholesale Fixed Access Services Pricing Decision and also in support of the consultation in ComReg Document 17/26 are both relatively new and based on a BU-LRAIC+ approach, which incorporate an MEA perspective. ComReg is of the preliminary view that such models - in addition to those detailed in the 2012 Pricing Decision - provide a ready solution to determine market tariffs.

⁷⁴⁸ As set out in the 2013 Non-Discrimination Recommendation.

ComReg's preliminary view on the appropriate cost approach

9.369 For the reasons set out in the preceding paragraphs, ComReg is of the preliminary opinion that the current cost approach is the most relevant cost base to adopt to determine charges for MI LL WHQA products, services and facilities in the Zone B MI WHQA Market, as it will continue to promote competition and appropriately reward investment by Eircom and Access Seekers.

What are the appropriate Cost Models?

9.370 Cost models are needed to assess the efficient cost levels for terminating segment products, services and facilities, including associated Interconnection facilities which reflects a reasonable level of contribution to costs.

9.371 In order to establish an efficient level of costs so as to ascertain the cost oriented tariffs for terminating segments, ComReg is of the preliminary view that the cost models are the appropriate remedy to apply.

9.372 Given ComReg's preliminary opinion is that LRAIC Plus based on a CCA approach is more appropriate where infrastructure investment is concerned, ComReg must then consider the type of model that is appropriate to adopt to determine the costs associated with the provision of MI WHQA LL services in the Zone B MI WHQA Market.

9.373 ComReg has considered two options:

- (a) A top down ('TD') model; and
- (b) A bottom up ('BU') model.

Top-Down Model

9.374 A top down model uses as a starting point the current financial information of the incumbent as an input. The information required can be obtained from the financial accounts (e.g. income statement, balance sheet etc.) or from budgeted accounts. This approach achieves exact cost recovery as it is linked to the actual investments made by an SMP operator.

9.375 The disadvantages of this approach, however, are as follows:

- (a) the accounting information may include inefficient costs incurred by an SMP operator;
- (b) it relies on significant amounts of detail from the SMP operator;
- (c) it relies heavily on the robustness of the data provided by the SMP operator; and

- (d) it cannot be converted into a forward-looking approach and may therefore provide the wrong “build/buy signal” to industry.

9.376 TD models can be constructed on a HCA or CCA basis. In a TD model based on HCA accounts, the net book value of assets are derived from the incumbent’s fixed asset register (depreciated over their remaining useful life). In a TD model based on CCA accounts, the assets are revalued to their current costs, and discounted (via depreciation charged to date) to reflect the period of use since the initial investment. This results in a change in the depreciation and return on capital charges associated with a CCA approach rather than one based on HCA.

Bottom-Up Model

9.377 A BU model does not rely on historical financial data. Instead, it reflects the choices of a hypothetical, forward-looking efficient operator from both a technical and operational point of view.

9.378 Several approaches can be adopted. The most commonly used approaches are as follows:

- (a) **Scorched Earth:** This approach considers the theoretical situation of developing a new network, with the existing network functionality but with 100% efficiency. Service Provider’s networks develop incrementally over many years, dealing with immediate local demands in a region, often leveraging available assets to minimise immediate costs. So the networks evolve based on either a short or medium term perspective. This leads to inevitable inefficiencies in the network design and costs when considered in retrospect. A scorched node approach considers what and where demand exist today and allows for the design of an optimal network configuration, to meet existing demand for services at the actual locations where it exists. The costs of such a network would result in 100% efficiency. In effect it would benefit from hindsight.
- (b) **Scorched Node:** In the scorched node approach, the existing Nodes are said to be fixed whereas all other network elements can be optimised. An optimised network is then built within the constraints of the existing Nodes.

9.379 A scorched node approach is often considered to be the preferred approach as it allows for the modelling of efficient costs and scale while maintaining the costs and technology assumptions faced by the SMP operator.

ComReg's preliminary view on the appropriate cost model

- 9.380 ComReg is of the preliminary view that a scorched node BU approach should be used in developing the appropriate cost models. BU models are easier to develop and maintain and they are better suited than TD models to provide appropriate "Build/Buy signal" to the market since they are more reflective of the conditions faced by an Access Seekers wishing to provide service to the retail market. In addition the BU model provides the opportunity to exclude inefficient costs which an SMP provider might include in their summary costs.
- 9.381 Having determined that a BU approach should be used, the next step is to determine the appropriate cost standard (see above). ComReg is of the preliminary view that it is appropriate to use BU-LRAIC+ cost models to determine the cost orientation for terminating segment MI WHQA products in the Zone B MI WHQA Market, and to derive cost oriented tariffs for related services and facilities including WEIL Interconnection products.
- 9.382 The predominant BU-LRAIC+ cost models required to establish cost oriented tariffs already exist and have been described in paragraphs 9.320 and 9.321 above, namely the cost models detailed in the 2016 Wholesale Fixed Access Services Pricing Decision⁷⁴⁹ and the 2012 Pricing Decision⁷⁵⁰. Furthermore, as noted above, the NGN Core Model is currently under review in the consultation relating to markets 3a and 3b (i.e. ComReg Document 17/26⁷⁵¹) and this more recent iteration of the core network cost base can also assist Eircom in assessing cost orientation for the MI WHQA WSEA logical tariffs.
- 9.383 The terminating segment MI WHQA products principally consist of two components:

⁷⁴⁹ The Revised CAM as set out in Chapter 5 of the Wholesale Fixed Access Services Pricing Decision.

⁷⁵⁰ As set out in Chapter 4 of the 2012 Pricing Decision.

⁷⁵¹ As set out in Chapter 8 of ComReg Document 17/26.

- (a) The WSEA Physical, which is the connectivity of a terminating segment MI path from the end user location to the adjacent serving Eircom Exchange or Node. The chief input costs concerned are the trench and fibre optic cable (influenced by the distance over which connectivity is required), in addition to the deployment of customer premises device (e.g. a modem) on which the fibre cable is terminated. ComReg proposes to use the results of the Revised CAM model detailed in Chapter 5, section 5 (pages 78-97) of the 2016 Wholesale Fixed Access Services Pricing Decision and, in particular, the subset of the model dealing with Access fibre or dark fibre costs to determine the tariff for the WSEA Physical; and
- (b) The WSEA Logical, which relates to the costs of transiting the core NGN Ethernet network hierarchy from the network node serving the end user location to the final handoff point to a WEIL or Interconnection facility, serving the Access Seeker. Chapter 4 of the 2012 Pricing Decision, describes the Core Network NGN Cost model which was used at that juncture to establish the costs of core network transit by leased line products. Furthermore, the NGN Core Model which is currently under review in the consultation relating to markets 3a and 3b can also assist Eircom in assessing cost orientation for the MI WHQA WSEA logical tariffs. Therefore, the combination of both models can assist Eircom in establishing an update on the cost oriented tariffs that are relevant for WSEA Logical component of the terminating segment MI WHQA products in the Zone B MI WHQA Market.

9.384 As stated above, it is ComReg's preliminary view that models based on bottom-up long run average incremental cost plus (referred to as "**BU-LRAIC plus**") costs establish the cost oriented maximum charges relating to terminating segment MI WHQA products in the Zone B MI WHQA Market, in addition to the costs associated with related services and facilities including WEIL Interconnection products. These models can be used to identify any differentials between existing market tariffs and the costs determined through the cost modelling exercise.

9.385 However, ComReg recognises that the facility of BU LRAIC+ cost models used to determine cost orientation for MI leased line terminating segments and for ancillary products such as interconnection facilities, requires further processing by Eircom to develop a comprehensive list of tariffs for the large range of product variants which exist in the MI WHQA market. In addition, the finalisation of the NGN Core network cost model in the context of the consultation in Markets 3a and 3b, may result in delays in the completion of the suite of reference cost models. In the interim ComReg's position is that existing wholesale regulated tariffs which are listed on Eircom's LLRO price list for MI terminating segment products should continue to apply in the Zone B MI WHQA Market. Furthermore, wholesale tariffs for ancillary services such as interconnection products should also pertain for a period, until Eircom conclude on the update of a new schedule of cost oriented tariffs for both MI terminating segments and interconnection facilities such as WEILs.

Pricing Approach

9.386 ComReg is proposing to continue the imposition of a range of pricing obligations upon Eircom in order to provide market assurance and avoid the risk of market abuse via excessive pricing in the Zone B MI WHQA Market. In this respect, ComReg proposes to apply cost orientation based on the principles outlined in the 2012 Pricing Decision. For WSEA Physical, ComReg proposes that Eircom use the Revised CAM model as outlined in the 2016 Wholesale Fixed Access Services Pricing Decision⁷⁵². In relation to the WSEA logical tariffs ComReg proposes that Eircom utilise the Core Network NGN cost model detailed in the 2012 Pricing Decision⁷⁵³ and also with reference to the NGN Core model, detailed in ComReg Document 17/26⁷⁵⁴ (as may be amended). Furthermore, in relation to the cost orientation obligation for WEIL product tariffs, ComReg proposes that Eircom utilise the cost models pertaining to the 2012 Pricing Decision. In respect of each, ComReg proposes that Eircom use the BU-LRAIC+ cost models outlined above to determine the principle costs for the network components which constitute the major infrastructural inputs.

⁷⁵² The Revised CAM as set out in Chapter 5 of the Wholesale Fixed Access Services Pricing Decision.

⁷⁵³ As set out in Chapter 4 of the 2012 Pricing Decision.

⁷⁵⁴ As set out in Chapter 8 of ComReg Document 17/26.

9.387 In relation to the existing Margin Squeeze Test which applies for all retail MI products, the advent of the deregulation of the AIIC MI WHQA product market, results in a significant share of the MI customer base services being deregulated and no longer facing the requirement to meet margin squeeze obligations. As a result many retail tenders which are bid for by Eircom and other providers will reflect a mix of demands for wholesale MI products in both the Zone A MI WHQA Market and Zone B MI WHQA Market. As no ex ante obligations will apply to the provision of services in the Zone A MI WHQA Market, margin obligations absent, will permit bidders to significantly alter prices in that market. As a result, within a tender bid with a mixed portfolio of wholesale MI products spread across the Zone A MI WHQA Market and Zone B MI WHQA Market, it can be possible for a provider to bid for the overall tender by meeting the cost orientation of those products provided in the Zone B MI WHQA Market, but to compensate by materially discounting the tariffs for those products which are in the wholesale Zone A MI WHQA Market and which are no longer regulated. This calls into question the efficacy of retaining a margin squeeze test and so ComReg intends to remove this obligation and to rely on ex-post remedies.

Duration of the Price Control

9.388 While the cost models include costs and forecast demand estimates beyond the year 2020, ComReg is of the preliminary view that in line with the market analysis process, the price control period should be set for at least three years. However, ComReg proposes to carry out a review of the main aggregated inputs of the NGN Core Model, as appropriate, insofar as this model assists in the determination of cost orientated tariffs for the WSEA Logical component of MI WHQA products. Any such reviews will include a reassessment of the costs and volumes to ascertain if any material or exceptional changes associated with model inputs are required.

Summary of Preliminary Conclusions on Price Control and Cost Accounting

9.389 Having regard to the analysis set out in paragraphs 9.307 to 9.388 above, ComReg's preliminary view is that proposed pricing and cost accounting obligations (the latter discussed further below) are proportionate and justified.

9.390 ComReg's preliminary view is that within the Zone B MI WHQA market cost oriented tariffs for terminating segment for MI leased line products should apply based on a suite of BU LRAIC+ cost models. The cost models which should be used are those detailed above in paragraphs 9.320 and 9.321. Similarly, the cost orientation for interconnection and ancillary services should be revised in the context of the cost models detailed in 2012 Pricing Decision.

9.391 ComReg's preliminary view is that during an interim period whilst Eircom develops a revised schedule of cost oriented tariffs for the remaining regulated services within the MI WHQA market, Eircom will retain the existing tariffs listed on its LLRO price List. On completion of this review, Eircom should then submit to ComReg a revised list of tariffs for the regulated services in the Zone B MI WHQA market, based on cost orientated evidence available within the suite of cost models outlined.

9.5.5 Accounting Separation and Cost Accounting Remedies

Overview

9.392 In Section 8 ComReg identified that Eircom has the ability and incentive to potentially engage in a range of anti-competitive pricing behaviours to the ultimate detriment to competition and consumers. These included the risk that Eircom could charge excessive prices for MI WHQA products, services and facilities, or that Eircom might impose a margin squeeze in order to leverage its SMP position from the Zone B MI WHQA Market into adjacent (e.g. Zone A MI WHQA Market) or downstream markets. In view of this, ComReg considers that the imposition of obligations of accounting separation and cost accounting on Eircom is justified.

9.393 In general, if specific price control obligations, via cost orientation, are to be meaningful, it may be necessary to have a clear and comprehensive understanding of the costs associated with an SMP operator's provision of those products. Obligations to maintain appropriate cost accounting systems generally support obligations of price control (and accounting separation), and can assist ComReg in monitoring the obligation of non-discrimination.

Proposed Accounting Separation and Cost Accounting Remedies

9.394 Having regard to the need to support the effectiveness of the proposed price control obligations set out above, ComReg considers that the continued imposition of accounting separation and cost accounting obligations upon Eircom in the Zone B MI WHQA Market is required. In this respect, Eircom shall ensure that it maintains appropriate costs accounting systems to justify its prices/costs or to permit a review of the appropriate level of costs which should be considered in future reviews of the cost model used to determine cost orientated prices. The detailed nature of these accounting separation and cost accounting obligations are those currently imposed upon Eircom and as specified in the 2010 Accounting Separation Decision (as may be amended from time to time).

9.395 The burden of proof rests with Eircom to show that its prices/charges for MI WHQA LL and related Interconnection facilities, are derived from costs, having regard to the nature of the proposed price control obligations. Furthermore, for the purpose of calculating the costs of efficient provision of such services, in accordance with Regulation 13(4) of the Access Regulations, ComReg notes that it may also use cost accounting methods independent of those used by any SP in the market. Additionally, ComReg can also issue direction requiring an operator to provide full justification for its prices, and may, where appropriate, require prices to be adjusted.

9.396 In this context ComReg's preliminary view is that the proposed cost accounting and accounting separation obligations, are proportionate and justified.

Proposed Accounting Separation remedies

9.397 ComReg intend to retain the obligation requiring Eircom to publish a consolidated Wholesale Leased Line set of results; inclusive of revenues and costs for both wholesale MI and TI LL products. This arises in light of the proposals for ongoing cost orientation regulation of TI Market based PPC products at bandwidths of 2Mb/s and below, but also as the obligation of cost orientation is proposed to continue to apply to MI LL products in the Zone B MI WHQA Market.

9.398 In the context of MI products, as it is intended that only those products delivered in the Zone B MI WHQA Market will continue to be regulated, ComReg proposes to retain the requirement to provide consolidated financial results for all MI LL products. ComReg also proposes to include an obligation for Eircom to provide a statement within the AFI portfolio of reports (if and when required by ComReg), outlining the total revenues realised from wholesale MI product being in the Zone B MI WHQA Market. This will be used by ComReg to inform a later assessment of appropriate accounting separation obligations for MI LL products in the Zone B MI WHQA Market and assist with any ex-post reviews. It is also proposed that other AFI reports relating to MI Interconnection facilities such as WEILs will still remain an obligation.

9.5.6 Requirement to provide a Statement of Compliance

9.399 Pursuant to Regulation 9, 10, 11, 12 and 13 of the Access Regulations ComReg is proposing to require that Eircom should be required to submit to ComReg a written Statement of Compliance ('**SoC**') demonstrating its compliance with all of its regulatory obligations. i.e. not just its non-discrimination obligations, in the Zone B MI WHQA Market. This is considered proportionate and justified having regard to the need to ensure effective monitoring and enforcement of all regulatory obligations, given the potential for any non-compliance to impact ultimately on competition in downstream or adjacent markets.

9.400 ComReg's preliminary view is that, subject to any confidentiality considerations, the SoC should be published by Eircom on its Eircom's publicly available website, in accordance with its transparency obligations which are discussed in paragraphs 9.223 to 9.306 above.

Proposed Requirements

9.401 In this respect, Eircom is to be required to submit to ComReg a written SoC that adequately demonstrates its compliance with its regulatory obligations in the Zone B MI WHQA Market, to include the following:

- (a) a full and true written statement, signed by a Director or Directors (the '**Directors**') on behalf of the Board of Directors, of Eircom Ltd⁷⁵⁵, to be provided annually within 6 months of Eircom's financial period end⁷⁵⁶ in which,
 - (i) the Directors acknowledge that they are responsible for Eircom securing compliance with its regulatory obligations;
 - (ii) the Directors confirm that - in their opinion - arrangements, structures and internal controls are in place that provide reasonable assurance that Eircom is compliant with its regulatory obligations;
 - (iii) the Directors explain the basis upon which the confirmation in (ii) above is made, including the information relied upon and the processes followed, in order to support the assertions made in this Statement of Compliance and to ensure that its contents are materially accurate in all respects;

⁷⁵⁵ Which, for the avoidance of doubt, shall include any successors and/or assigns of Eircom Limited.

⁷⁵⁶ For the avoidance of doubt, where the financial period is shorter or longer than one year, within 6 months of the end of that financial period.

- (iv) in the event that the Directors cannot provide the confirmation required in (ii) above, the Directors shall provide the reasons for this in writing to ComReg. Such explanation should explain, amongst other things, whether;
 - a. the arrangements structures and internal controls, referred to in (ii) are not in place, and if so, why, and/or
 - b. in the Directors' opinion, the arrangements structures and internal controls, referred to in (ii) above do not provide reasonable assurance that Eircom is compliant with its regulatory obligations.
- (v) the Directors confirm that, in their opinion, they have conducted an appropriate review process in the period since the last Statement of Compliance provided, pursuant to this section, to ensure the ongoing effectiveness of the arrangements, structures and internal controls referred to in (ii) above. This confirmation shall be accompanied by a description of the review process;
- (vi) the Directors confirm that adequate documentation is in place that, in their opinion, would be sufficient to provide evidence as to the operation and adequacy of the arrangements, structures and internal controls on which reliance is placed to ensure Eircom's regulatory compliance including, but not limited to:
 - a. risk identification as it relates to non-compliance with regulatory obligations;
 - b. the design of measures and arrangements and internal controls to mitigate such risk;
 - c. the operation of such controls;
 - d. a review of the adequacy of measures arrangements and internal controls.
- (b) a description of the process of risk identification, and the controls developed to mitigate risks of non-compliance with Eircom's regulatory obligations, as they relate to the categories of activities in paragraph 9.402 below and shall include the following in particular:
 - (i) a detailed description of the risk analysis process, to include the following:
 - a. a description of the expertise employed by Eircom;
 - b. a list of all material including all relevant documentation;
 - c. a description of how the material and expertise was used; and
 - d. a description of the purpose of each process which was analysed for risks of non-compliance.

- (ii) a detailed description of the risks identified utilising the risk analysis process described in paragraph 9.401 (b)(i) above;
- (iii) a detailed description of the controls identified developed utilising the control development process described in paragraph 9.401 (b)(iv) below;
- (iv) a detailed description of the control development process to include the following:
 - a. a description of the relationship of each control to the underlying risk identified at paragraph 9.401 (b)(ii) above.
 - b. a description of the expertise relied upon by Eircom management;
 - c. a list of all material including all relevant documentation used;
 - d. a description of how the material and expertise was used; and
 - e. a description of the process used to assess the effectiveness of the controls.
- (v) a description of the operation of controls including the method employed by Eircom to record and store the data produced when controls are operated.
- (vi) a description of and the identification of the repository in which the data from the operation of each control is recorded and stored.

9.402 The obligations set out in paragraph 9.401 above shall apply, but , are not limited to, the following categories of activities:

- (a) Pre-provisioning, provisioning and service assurance for MI WHQA products services and facilities;
- (b) Product development including product enhancements, and pre product development screening of Access requests;
- (c) Product prioritisation and investment decisions;
- (d) Access to shared resources including IT and product development resources;
- (e) The management of information, both Structured Information⁷⁵⁷ and Unstructured Information⁷⁵⁸ in conformance with regulatory requirements;

⁷⁵⁷ Structured Information means information that is documented and managed through an established business process in a formal manner and includes memos, email messages, letters, order forms, invoices, agendas, reports, etc.

⁷⁵⁸ Unstructured Information means information that is managed in an informal manner.

- (f) The preparation and submission of bids in response to a commercial or government request for proposal or tender; and
 - (g) Other categories as reasonably required by ComReg.
- 9.403 The documentation referred to in paragraph 9.401 above shall be of sufficient clarity and detail to enable ComReg, or a third party, as determined by ComReg, to review any relevant Statement of Compliance for completeness and accuracy. Such documentation and information shall also enable ComReg, or a third party, as determined by ComReg, to assess whether Eircom has taken all reasonable steps to ensure that the risk assessment and control and governance measures referred to in paragraph 9.401 above provide reasonable assurance to ComReg that Eircom is compliant with the obligations set out in this Decision Instrument.
- 9.404 Eircom shall also ensure that the SoC is kept updated as required to reflect material changes to the documentation and information detailed in paragraph 9.401 above. These updates will be provided to ComReg within one (1) month of the update being made by Eircom.
- 9.405 Updates or changes to any SoC provided to ComReg will be presented such that the changes are highlighted and the Statement of Compliance documents include a Version Control⁷⁵⁹ and Revision History⁷⁶⁰.
- 9.406 Eircom is also to be required to publish the SoC, and updates to the SoC, on its publically available website within one (1) month of providing it to ComReg, unless otherwise agreed with ComReg.
- 9.407 Other than a set out in paragraph 9.401(a) above (which shall be provided annually), Eircom shall provide to ComReg a SoC as referred to above to ComReg within six (6) months of the effective date of the decision arising from this Further Consultation or:
- (a) in the case of any offer of a new MI WHQA product, service or facility, seven (7) months in advance of its being made available;
 - (b) in the case of any change to an existing MI WHQA product, service or facility, three (3) months in advance of it being made available;

⁷⁵⁹Version Control means a standardised regime for the management of changes to documents with different versions being identified by a number, letter or code, associated with a date and timestamp.

⁷⁶⁰ Revision History means a documented list of changes to a document containing the changes from the previous draft of the document.

(c) as otherwise may be required by ComReg.

9.408 The function of the SoC is to require Eircom to demonstrate to ComReg how Eircom has ensured compliance with its regulatory obligations imposed in the Zone B MI WHQA Market. The SoC obligation requires Eircom to identify and explain the regulatory governance measures in place in order to identify and manage the risk of non-compliance with its obligations, thereby providing reasonable assurances to ComReg that Eircom effectively manages any risks of non-compliance.

9.409 The SoC is required to be signed by a person of appropriate expertise and authority within Eircom. ComReg considers that the signatory needs to be a person within Eircom who is sufficiently independent from day-to-day operational activity and decision making in relation to the development, and supply of wholesale regulated products and services, in order to be able to objectively assess Eircom's compliance with its regulatory obligations.

9.410 ComReg considers that it is reasonable that ComReg should understand the review and verification process followed by the signatory in order for them to reasonably satisfy themselves that they can confirm that Eircom is in compliance with its regulatory obligations.

9.411 ComReg has considered the recommendations of its advisors⁷⁶¹, KPMG, who, along with Cartesian, reviewed Eircom's Regulatory Governance Model ('RGM'). In the KPMG Report⁷⁶², KPMG's observation G1 states⁷⁶³:

"Create an Independent Oversight Body ('IOB'), as a sub-committee of the Board, with responsibility for the robust oversight of the full RGM. The majority membership of the IOB should consist of independent members who are not eir Group Directors or employees."

⁷⁶¹ See paragraphs 2.69 to 2.70 above.

⁷⁶² See footnote 81.

⁷⁶³ KPMG Report, Section 1.4.1: Key observations and actions for (Eircom) Management consideration (page 17).

9.412 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]⁷⁶⁴.

9.413 In Eircom's Industry Update on its June 2017 RGM Update⁷⁶⁵ Eircom stated:

"One of the three strands of Eircom's Regulatory Governance Model is the preparation of Independent Regulatory Compliance & Audit Reports, prepared by the Head of Compliance and Equivalence (C&E) and the Head of Internal Audit (IA), based on their internal reviews to the Board Regulatory Committee (RegCo) on an approximately six monthly basis. The purpose of these Reports is to provide an update to Industry based on the third strand of the RGM and to give assurance of board and RegCo oversight."

9.414 ComReg notes therefore that Eircom considers that it is appropriate that members of the Eircom Board should have oversight of the operation and effectiveness of Eircom's regulatory governance processes and that Eircom have implemented reporting requirements from Eircom's Audit and Assurance functions to the Board Regulatory Committee.

9.415 ComReg also notes that under the Companies Act 2014 Company Directors have specific obligations with which they must comply relating to securing compliance with relevant obligations, defined in the Companies Act 2014, as follows⁷⁶⁶:

*"The directors of a company to which this section applies shall also include in their report under **section 325** a statement—*

(a) acknowledging that they are responsible for securing the company's compliance with its relevant obligations; and

(b) with respect to each of the things specified in subsection (3), confirming that the thing has been done or, if it has not been done, specifying the reasons why it has not been done.

⁷⁶⁴ [REDACTED]
[REDACTED]

⁷⁶⁵ Industry Update on Eir's RGM, Dated June 2017 ('June 2017 RGM Update').

⁷⁶⁶ Companies Act 2014, Chapter 9, section 325: Obligation to prepare directors report for every Financial year.

(3) *The things mentioned in subsection (2)(b) are—*

- (a) the drawing up of a statement (to be known, and in this Act referred to as, a “compliance policy statement”) setting out the company's policies (that, in the directors' opinion, are appropriate to the company) respecting compliance by the company with its relevant obligations;*
- (b) the putting in place of appropriate arrangements or structures that are, in the directors' opinion, designed to secure material compliance with the company's relevant obligations; and*
- (c) the conducting of a review, during the financial year to which the report referred to in subsection (2) relates, of any arrangements or structures referred to in paragraph (b) that have been put in place.”*

9.416 In ComReg’s opinion, while the obligations referred to in the Companies Act 2014 do not include regulatory obligations, ComReg considers that it is relevant and instructive that the Companies Act 2014 requires Directors to prepare a statement that, *inter alia*, confirms that, in their opinion, arrangements are designed and put in place that secure material compliance with the company’s relevant obligations.

9.417 In ComReg’s opinion, in order to ensure that the signatory has the required independence and authority, the signatory should be a Director authorised to represent the Board of Directors⁷⁶⁷ of Eircom.

9.418 ComReg is aware from SoCs previously received⁷⁶⁸ from Eircom that there are various certification processes in place as part of the governance model which they have implemented in order to govern compliance with their regulatory obligations generally. ComReg understands that these include self-certification processes by Eircom managers certifying, for example the operation of the governance processes in their areas of responsibility

⁷⁶⁷ As defined in the Companies Act 2014.

⁷⁶⁸ For example Eircom’s Non NGN Ethernet Leased Line Statement of Compliance dated July 2014.

- 9.419 ComReg proposes that information be included in the SoC describing the processes followed and the information relied upon by the signatory to the SoC and by the managers who are required to certify the correct operation of the governance process. As some form of verification process must currently be carried out by the SoC signatory and the staff who provide certification, ComReg considers that providing this information should not be an additional undue burden and is reasonable and proportionate.
- 9.420 ComReg has identified categories of activities, particularly relevant to the delivery of regulated wholesale services where effective regulatory governance will assist Eircom to remain in compliance with its regulatory obligations resulting in benefits to competition and ultimately End Users.
- 9.421 For the avoidance of doubt, ComReg is not proposing that these are the only categories or areas where regulatory governance by Eircom is required. However, in this Further Consultation ComReg proposing that these categories should be included in the SoC. ComReg may require Eircom to provide a SoC relating to other areas of Eircom's governance of its regulatory obligations in the Zone B MI WHQA Market from time to time.
- 9.422 Proper governance of the process for prioritising MI WHQA developments during the product development process, is for example important to ensure that all access requests are treated in an equivalent manner. Eircom's decisions with respect to the prioritisation of product development would require consideration of Eircom's regulatory obligations as they apply to the Zone B MI WHQA Market.
- 9.423 Eircom's investment decisions can affect its ability to develop and make available regulated wholesale services and to maintain the quality and availability of regulated wholesale services generally. It is ComReg's preliminary view that the processes employed and the information relied upon by Eircom in order to make investment decisions should be subject to a risk analysis in the context of Eircom's compliance with its regulatory obligations in the Zone B MI WHQA Market and the subsequent development of controls to manage any risks identified.
- 9.424 In ComReg's opinion, MI WHQA products, services and facilities have particular relevance for the provision of high bandwidth WHQA services to medium to large End Users such as corporations or government entities. These End Users typically have multiple sites which require inter-connectivity for high bandwidth services in order to transact business efficiently.

- 9.425 Typically, such End Users prepare specifications and initiate a competitive tender process for their required services, which includes a closing date by which responses must be received from potential bidders. The duration of the resultant contracts are usually for a period of years and can be of high value in revenue terms.
- 9.426 In ComReg's opinion high value tenders which rely on MI WHQA products, services and facilities provide an opportunity for Access Seekers to secure significant revenue over the duration of the resultant contract. Therefore, this potentially gives rise to incentives for Eircom to discriminate against Access Seekers regarding the timely provision of MI WHQA products, services and information when such opportunities arise.
- 9.427 ComReg considers, that due to the effort required to prepare a bid to supply services, the high value of contracts, and the short duration within which a bid should be prepared and submitted, that the regulatory governance arrangements associated with this particular category of activity, as it applies to the provision MI WHQA services, should be included in the Statement of Compliance.
- 9.428 In ComReg's opinion in order to ensure competition in the provision of such downstream services, it is important that Access Seekers are aware that there is sufficient regulatory oversight of, *inter alia*, the processes used by Eircom regarding self-supply of MI WHQA products, services and information and the provision of MI WHQA products, services and information to Access Seekers. Therefore ComReg proposes to require Eircom to demonstrate, in the SoC, that it has put in place appropriate regulatory governance arrangements in relation to the preparation and submission of bids in response to a commercial or government request for proposal or tender.
- 9.429 As noted above, one category of activity is the governance applied to the management and distribution of information. This includes, for example, including the identification and the control of the risk of inappropriate flow of information between business units or appointment holders, including but not limited to the appropriate management of wholesale customer confidential information. This includes governance of both Structured Information and Unstructured Information.

- 9.430 Proper governance of the quality and availability of information to Access Seekers and Eircom's downstream arm on technical changes, network upgrades, new developments etc. also falls into this category. Eircom has obligations, such as transparency and non-discrimination, with respect to the management of such information. It is reasonable to expect that appropriate and effective governance and oversight of the management of information, as required by Eircom's regulatory obligations in the Zone B MI WHQA Market will apply throughout the Eircom organisation.
- 9.431 ComReg proposes that the scope and nature of the SoC should require Eircom to demonstrate that it has put in place appropriate risk identification, control and governance processes such that it can reasonably demonstrate that, on an ongoing basis, it is ensuring compliance with its regulatory obligations.
- 9.432 The required categories of activities are particularly relevant to the availability of regulated wholesale services and as they have the potential to impact on Eircom's compliance with its regulatory obligations, likely to be subject to Eircom's RGM, as discussed in the following section. Therefore it should not be unduly burdensome on Eircom to provide the required SoC. In addition, there is a requirement to detail the governance measures applied to ensure that risks of non-compliance are identified by Eircom and controls are developed where required.
- 9.433 The proposed SoC obligation includes additional information which is required to be provided to ComReg. In order to determine how Eircom has assessed the risk of non-compliance, ComReg proposes to require Eircom to provide information and material regarding its risk analysis process. This information concerns the material used by Eircom to assess any risks of non-compliance. This includes how the risk analysis was carried out and how the material was assessed during that process.
- 9.434 In all cases SoC and associated updates should include version control information including a revision history in order to allow the reader of the SoC to easily identify changes and when they were made.

Eircom's Regulatory Governance Model

- 9.435 ComReg notes that since December 2010 Eircom has planned and implemented a RGM for the governance and oversight of its compliance with its regulatory obligations. The RGM relies on Eircom's expertise and knowledge of its processes, systems and procedures to identify, manage and control the risks of non-compliance with its regulatory obligations. As noted in Section 2⁷⁶⁹, ComReg is currently undertaking a review to determine the effectiveness of Eircom's RGM.
- 9.436 Eircom has used the RGM to develop and provide SoC to ComReg where it has an obligation to do so. Eircom has also provided SoC voluntarily to ComReg in a number of other regulated markets⁷⁷⁰. ComReg understands that Eircom's RGM is being developed further such that it allows governance and oversight of Eircom's other obligations in addition to its non-discrimination obligations, in particular, in relation to its transparency and pricing obligations.
- 9.437 A key element of the RGM is the analysis, development, management and documentation of the risk and control framework. This includes the production of data and information some of which could be readily used when preparing a SoC. A significant portion of the information required for the SoC generated as part of the risk assessment processes executed as part of the implementation of Eircom's RGM.
- 9.438 Therefore, ComReg also considers that it is justifiable and proportionate, and not unduly burdensome for Eircom to provide a SoC to ComReg with respect to its compliance with all of its regulatory obligations imposed on it in the Zone B MI WHQA Market. For example, Eircom analyse risk as part of its RGM process. ComReg does not consider that providing this additional information relating to the risk analysis process is likely unduly burdensome.
- 9.439 ComReg proposes that Eircom provide SoC for the Zone B MI WHQA Market within 6 months from the effective date of the Decision (to be published on foot of this Further Consultation). ComReg considers that some difference is required in the approach to the timeframe within which a SoC should be provided to ComReg with respect to changes to existing products on the one hand, and new products on the other. ComReg considers that the following timeframes are appropriate for the provision of the SoC by Eircom:

⁷⁶⁹ See paragraphs 2.69 to 2.71.

⁷⁷⁰ Including the current Leased Line Market.

- (a) in the case of any offer of a new MI WHQA product, service or facility, seven (7) months in advance of it being made available to industry;
- (b) in the case of any change to an existing MI WHQA product, service or facility, three (3) months in advance of it being made available to industry;
- (c) as otherwise may be required by ComReg.

9.440 ComReg would note that the timeframes specified above are aligned to the proposed transparency obligations discussed earlier in this Further Consultation, in particular, with respect to advance notification timeframes for proposed changes/amendments by Eircom to its ARO and prices.

9.441 ComReg has considered whether the SoC should be provided to Access Seekers and is of the preliminary view that it should be. The SoC is primarily concerned with the degree of governance Eircom applies to meeting its regulatory obligations in the Zone B MI WHQA Market.

9.442 ComReg is of the preliminary view that the provision of the SoC to Access Seekers gives greater visibility to Access Seekers of the processes Eircom has put in place to ensure it complies with its regulatory obligations in the Zone B MI WHQA Market. This has the potential to improve Access Seekers confidence that they are receiving the same wholesale product or service that Eircom is supplying to its downstream arm, for example, and this is beneficial to providing regulatory certainty, competition and ultimately to End Users.

9.443 ComReg notes that information similar to the material now being required to be provided by Eircom under the proposed SoC obligations has already been provided to Access Seekers through Eircom's publication of the Eircom RGM Updates⁷⁷¹.

⁷⁷¹ Eircom publish a document on the Eircom website entitled *Industry Update on eir's Regulatory Governance Model*. Versions of this document have been published in August 2015 and May 2016. The first report was published in May 2016. Eircom state that the purpose of this Report is to inform OAOs on how the Regulatory Governance Model is being implemented and to highlight key trends and issues. See paragraph 2.69 above.

- 9.444 However, ComReg recognises that some information to be provided to Access Seekers as part of the proposed SoC may be considered confidential by Eircom. For example, information that relates to investment decisions. In these circumstances, where a request is made by Eircom to ComReg, not to publish aspects of the SoC to Access Seekers, then ComReg will apply its rules relating to the publication of confidential information⁷⁷² when assessing any such request. In this respect the proposed obligations concerning confidentiality as discussed in paragraphs 9.281 to 9.283 would apply.
- 9.445 ComReg's preliminary view is that Eircom should provide the SoC to Access Seekers by making it available on its publicly available website one month after provision of the SoC to ComReg, unless otherwise agreed by ComReg.
- 9.446 ComReg does not consider the SoC obligation to be over burdensome on Eircom, as it has, to date, implemented a RGM in order to comply with its regulatory obligations, including its obligations as they apply to the MI WHQA Market. It is reasonable to assume, and would be expected, that consideration would be given by Eircom to all processes when developing a RGM in order to comply with regulatory obligations. Therefore, ComReg considers that such an obligation, including the associated timelines with respect to providing the SoC to ComReg, is justified and proportionate.
- 9.447 ComReg notes that additional information is also requested in the proposed SoC relating to the development of controls to manage the risks identified by Eircom. ComReg considers that this is not unduly burdensome and is justified and proportionate as Eircom develops controls using its RGM process and has previously included them in SoC be provided to ComReg. Therefore the information requested relating to the development of controls is available to Eircom.
- 9.448 ComReg also does not consider that the additional step of providing the SoC to Access Seekers to be unduly burdensome as the SoC is required to be provided to ComReg and providing it to Access Seekers is not considered to be an additional burden.
- 9.449 Having regard to the analysis set out above, ComReg's preliminary view is that Eircom should be obliged to provide a SoC to ComReg with respect to all of its regulatory obligations as imposed in the Zone B MI WHQA Market.

⁷⁷² Guidelines on the treatment of confidential information Document No: 05/24s Date: 30th March 2005.

9.6 Overall Preliminary Conclusions on Remedies in the Zone B MI WHQA Market

9.450 Having regard to the competition problems identified in Section 8 and the discussion in this Section 9 above, ComReg proposes to impose a range of access, non-discrimination, transparency and price control, cost accounting and accounting separation remedies on Eircom, with such obligations being imposed in the Zone B MI WHQA Market.

Question 7: Do you agree with ComReg’s approach to imposing access, non-discrimination, transparency, price control and cost accounting and accounting separation remedies in the Zone B MI WHQA Market? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

9.451 ComReg has set out these remedies in the form of a Draft Decision Instrument which is attached at Appendix: 4 of this Further Consultation and Respondents are invited to comment on this Decision Instrument.

Question 8: Do you agree with ComReg’s draft Decision Instrument set out in Appendix: 4, in particular, that its wording accurately captures the intentions expressed in this Section 9? Do you agree with ComReg’s Definitions and Interpretations as set out in Part I of the Draft Decision Instrument? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers in the Draft Decision Instrument to which your comments refer.

9.452 Respondent’s should note that comments on the remedies themselves should be addressed in their responses to Question 7, while comments on the Draft Decision Instrument in response to Question 8 should principally to relate to whether it accurately captures, from the perspective of being sufficiently clear in its wording, the proposed remedies.

9.453 If, having considered respondents’ views on the proposed remedies set out in this Section, ComReg proposes to amend or clarify its position, this may lead to parallel updates to the Draft Decision Instrument.

10 Withdrawal of obligations in the LB, HB TI WHQA Markets and the Zone A MI WHQA Market

10.1 Preliminary view set out in the 2016 Consultation

- 10.1 In the 2016 Consultation⁷⁷³, having regard to ComReg’s preliminary view that no SP had SMP in either HB TI WHQA Market or the MI WHQA Markets and that, on a forward looking basis, no SP was likely to have SMP, ComReg proposed a six to nine month “sunset” period for the withdrawal of existing obligations in these markets⁷⁷⁴.
- 10.2 The purpose of the sunset clause was to allow Eircom’s wholesale customers sufficient time to seek out alternative WHQA arrangements (should they decide to change supplier) whilst maintaining service continuity, thus ultimately minimising any impact of the de-regulation of the HB TI WHQA and the MI WHQA Markets on SPs and ultimately end-users.
- 10.3 ComReg also proposed that Eircom would no longer be required (pursuant to regulation) to meet new requests for access in HB TI WHQA and/or MI WHQA Markets during the sunset period (although Eircom is free to do so on a commercial basis).
- 10.4 ComReg also noted that Eircom will be required to maintain its Wholesale Ethernet Interconnection Links (**WEIL**) products at cost orientated prices by virtue of this service being mandated in other markets.⁷⁷⁵

⁷⁷³ See section 9 of the 2016 Consultation.

⁷⁷⁴ It should be noted from the outset that, as ComReg has altered its preliminary view in relation to MI WHQA product and geographic market definition, and, subsequently its preliminary view on the competition assessment in the MI WHQA Markets, the issues raised by Respondents are considered in the context of the withdrawal of obligations in both the Zone A MI WHQA Market and Zone B MI WHQA Market.

⁷⁷⁵ For example, the WEIL service was mandated by ComReg in its “[Next Generation Access, Remedies for Next Generation Access Markets, ComReg Document 13/11, Decision D03/13](#)” dated 31 January 2013 (**‘the 2013 NGA Decision’**).

10.5 In addition, ComReg in the 2016 consultation⁷⁷⁶ proposed the removal of certain obligations in the LB TI WHQA market given its view that the PPC product was sufficiently adequate to address the competition issues identified in this market. These were:

(a) Wholesale Leased Lines ('WLLs')⁷⁷⁷ which include:

- (i) Analogue Leased Lines;
- (ii) Digital Leased Lines; and
- (iii) Channelised E1 (2MB) Access.

10.6 Finally, ComReg proposed to remove existing requirements to publish KPIs in relation to HB TI WHQA and MI WHQA products, given the then proposed removal of regulation in these markets.

10.2 Respondents' Views

10.7 5 out of the 12 Respondents expressed views on this issue. ALTO, BT, Verizon and Vodafone disagreed that regulation should be withdrawn from the MI WHQA Market as they did not agree that no SP had SMP.

10.8 In relation to the proposed sunset period, Vodafone noted that typical retail customers' contracts have a twenty-four month minimum term and called for an additional public consultation on transitional sunset arrangements.

10.9 ALTO and BT agreed that ex ante regulation was not appropriate for the HB TI WHQA Market, but suggested that any sunset period should be at least two years. Verizon reiterated its disagreement with the withdrawal of regulation in the HB TI WHQA Market, but noted that, at a minimum, Eircom should be required to continue providing HB TI WHQA products for the period covered by the market review.

⁷⁷⁶ Paragraphs 8.28 and 8.86 to 8.91 of the 2016 Consultation

⁷⁷⁷ As described in the Openeir documentation which is available at www.openeir.ie

- 10.10 Eircom agreed that ex ante regulation was not appropriate for the HB TI WHQA Market and the MI WHQA Market but did not accept that a six to nine month sunset period for the withdrawal of the existing remedies was either reasonable or proportionate. It considered that both markets have been effectively competitive for a number of years and referred to the Framework Regulations, arguing that ComReg has failed to conduct the review of WHQA Markets in a timely manner, thus, delaying the process of de-regulation. Eircom considered that the 2016 Consultation had effectively served as a notice of de-regulation of the HB TI WHQA and the MI WHQA Markets and therefore, any additional sunset period after publication of the resulting decision was not justified.
- 10.11 There were no comments offered from any respondents on the proposal to withdraw the obligation to supply the legacy WLL products listed in paragraph 10.5 above.

10.3 ComReg's Assessment of Respondents' Views

10.3.1 Withdrawal of obligations in the HB TI WHQA Market

- 10.12 ComReg considers that a six month sunset period is a sufficient and reasonable period for the withdrawal of obligations in the HB TI WHQA Market, in particular, having regard to the extremely low number⁷⁷⁸ of such LLs supplied by Eircom to other SPs. This time period should afford SPs a reasonable period within which to manage associated product changes/withdrawal with end-users, including the possibility of changing to alternative sources of supply, where available (ComReg notes that Eircom may, of course, continue to provide HB TI WHQA services once the obligation has been withdrawn).
- 10.13 ComReg notes that once it considers that no SP has SMP in the HB TI WHQA Market it is required to ultimately remove regulation. ComReg must strike a balance between this requirement and the need to ensure a smooth transition to deregulation that does not result in undue disruption for SPs, and ultimately consumers. ComReg considers that a six month sunset period achieves this aim and extending regulation to 1-2 years as suggested by some Respondents above would not be justified or proportionate and would be tantamount to continuing regulation.

⁷⁷⁸ See Section 5.2.2 above.

- 10.14 ComReg also does not agree with Eircom's view that the 2016 Consultation should serve as commencing the notice period for the withdrawal of obligations as ComReg has not, within it, made a decision on this matter. To suggest otherwise would effectively mean that ComReg pre-determines outcomes at consultation stage without the need to give due regard to Respondents' Submissions.
- 10.15 During the above six month sunset period, Eircom will not be required to provide access to new orders for HB TI WHQA LLs to Access Seekers (although it is free to do so on a commercial basis). It is to be required to maintain existing access at existing prices during this sunset period. Eircom is also not required to meet other obligations (for example, in relation to transparency, non-discrimination, margin squeeze etc.).

10.3.2 Withdrawal of obligations in the LB TI WHQA Market

- 10.16 As no comments were received from any respondents, ComReg proposes to proceed to withdraw obligations to provide WLLs i.e. Analogue Leased Lines; Digital Leased Lines and Channelised E1 (2MB) Access leased lines.

10.3.3 Withdrawal of obligations in the Zone A MI WHQA Market

- 10.17 In Section 4 of this Further Consultation, ComReg set out its preliminary view that there are separate geographic markets for the provision of MI WHQA services (in addition to a separate LB TI WHQA Market and a HB TI WHQA Markets. In Section 5 of this Further Consultation, ComReg set out its preliminary view that no SP is likely to hold SMP in the Zone A MI WHQA Market. In view of this preliminary finding, ComReg is obliged to remove existing SMP based regulation in this market.
- 10.18 As noted above, in the 2016 Consultation ComReg proposed a six to nine months "sunset" period for the withdrawal of existing obligations in the then national MI WHQA Market. ComReg remains of the view that a transitional sunset period is required in order to avoid unnecessary disruption to end-users both in the Zone A MI WHQA Market and the Zone B MI WHQA Market (given the nature of demand from multi-site retail end-users spans both such markets). Access Seekers will need a reasonable time period during which they can negotiate commercial arrangements with Eircom, to secure alternate suppliers, or in which to connect customer premises using their own infrastructure. ComReg considers that it would not be in the interest of industry or end-users for LLs to be disconnected within a short notice period.

- 10.19 Having considered Respondents' Submissions, ComReg is now proposing that a twelve month sunset period is appropriate within which Eircom would be required to maintain existing access to MI WHQA LLs already provided in the Zone A MI WHQA Market. In addition, and cost-orientation obligations would also remain in place until the expiration of this twelve month period. Eircom would not be required to meet other obligations (for example, in relation to transparency, non-discrimination, margin-squeeze etc.). ComReg considers that continued imposition of such obligations during sunset period would not be reasonable or proportionate in circumstances where ComReg's preliminary finding is that no SP has SMP.
- 10.20 ComReg has also considered whether Eircom should be required to provide access to new MI WHQA LLs during the sunset period. In this respect, ComReg notes that retail tenders/bids for MI LLs may be underway in the period surrounding the publication of the eventual decision flowing from the analysis set out in this Further Consultation. As noted in paragraph 10.18 above, Access Seekers will require some time to make alternative supply arrangements and, in view of this, where access to MI WHQA LLs is not available immediately after such a decision, they will not be in a position to compete for tenders/bids already underway. On the other hand, requiring Eircom to meet new access requests during the sunset period would not be ultimately sustainable in circumstances where post the twelve month sunset period Eircom is free to withdraw access to all MI WHQA LL services (although it may wish to continue to do so on a commercial basis). On balance, ComReg considers, therefore, that it is reasonable to require Eircom to provide new MI WHQA access requests for a very short period of 3 months following ComReg's decision. This 3 month period would run in parallel with the overall twelve month⁷⁷⁹ sunset period. ComReg notes that this is a different approach to that proposed with respect to HB TI WHQA LLs, however, there is no material new demand for such services.

10.4 ComReg's Preliminary Position in relation to the withdrawal of obligations

- 10.21 ComReg is of the further preliminary view that the following sunset should apply.

⁷⁷⁹ For example, in circumstances where a new MI WHQA access request is received at the end of month two, Eircom would only be obliged, under regulation to continue to provide this service for the remaining ten months of the twelve month sunset period.

- (a) **HB TI WHQA Market:** A sunset period of six months is appropriate. During this sunset period, Eircom will not be required to provide access to new orders for HB TI WHQA LLs (although it is free to do so on a commercial basis).
- (b) **LB TI WHQA Market:** : A sunset period of six months is appropriate. During this sunset period, Eircom will not be required to provide access to new orders for WLLs (although it is free to do so on a commercial basis), namely:
 - (i) Analogue Leased Lines;
 - (ii) Digital Leased Lines and
 - (iii) Channelised E1 (2MB) Access.
- (c) **Zone A MI WHQA Market:** A sunset period of twelve months is appropriate. During the first three months of this sunset period, Eircom will be required to provide access to new orders for MI WHQA LLs.

10.22 In all cases above Eircom is be required to maintain access at existing prices during the relevant sunset periods. Eircom is also not required, from the effective date of the decision to follow this Further Consultation, to meet other obligations (for example, in relation to transparency, non-discrimination, margin squeeze etc.).

Question 9: Do you agree with ComReg’s approach on the withdrawal of all existing obligations in the HB TI WHQA Market and the Zone A MI WHQA Market and withdrawal of the obligation to provide WLLs in the LB TI WHQA market? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

11 Regulatory Impact Assessment

11.1 Introduction

- 11.1 The Regulatory Impact Assessment ('**RIA**') is an analysis of the likely effect of proposed new regulation or regulatory change. The purpose of a RIA is to establish whether regulation is actually necessary, to identify any possible negative effects which might result from imposing a regulatory obligation and to consider any alternatives. The RIA should help identify regulatory options, and should establish whether proposed regulation is likely to have the desired impact. It is a structured approach to the development of policy, and analyses the impact of regulatory options on different stakeholders. Appropriate use of the RIA should ensure that the most effective approach to regulation is adopted.
- 11.2 ComReg's approach to RIA follows ComReg's published RIA Guidelines⁷⁸⁰ and takes into account the "Better Regulation" programme⁷⁸¹ and international best practice (for example, considering developments involving RIA published by the European Commission and the OECD).
- 11.3 Section 13(1) of the Communications Regulation Acts 2002 (as amended) requires ComReg to comply with Ministerial Policy Directions. In this regard, Ministerial Policy Direction 6 of February 2003⁷⁸² requires that, before deciding to impose regulatory obligations on Undertakings, ComReg shall conduct a RIA in accordance with European and international best practice and otherwise in accordance with measures that may be adopted under the "Better Regulation" programme.

⁷⁸⁰ [ComReg Document 07/56a](#), ComReg, "Guidelines on ComReg's Approach to Regulatory Impact Assessment", 10 August 2007 (the '**RIA Guidelines**').

⁷⁸¹ Department of the Taoiseach, "Regulating Better", January 2004. See also "Revised RIA Guidelines: How to conduct a Regulatory Impact Analysis", June 2009, ('**The Department of An Taoiseach's Revised RIA Guidelines**'), available from: https://www.taoiseach.gov.ie/eng/RIA_and_Related_Legislation/.

⁷⁸² Ministerial Policy Direction made by the Minister of Communications, Marine and Natural Resources on 21 February 2003.

11.4 In conducting the RIA, ComReg has regard to the RIA Guidelines, while recognising that regulation by way of issuing decisions, e.g. imposing obligations or specifying requirements in addition to promulgating secondary legislation, may be different to regulation exclusively by way of enacting primary or secondary legislation. Our ultimate aim in conducting a RIA is to ensure that all measures are appropriate, proportionate and justified. To ensure that a RIA is proportionate and does not become overly burdensome, a common sense approach will be taken. As decisions are likely to vary in terms of their impact, if after initial investigation, a decision appears to have relatively low impact ComReg may carry out a lighter RIA in respect of those decisions.

11.5 ComReg's approach to RIA follows five steps:

Step 1: Describe the policy issue and identify the objectives.

Step 2: Identify and describe the regulatory options.

Step 3: Determine the impacts on stakeholders.

Step 4: Determine the impacts on competition.

Step 5: Assess the impacts and choose the best option.

11.6 The purpose of carrying out a RIA is to aid decision-making through identifying regulatory options and analysing the impact of those options in a structured manner. The Department of An Taoiseach's Revised RIA Guidelines state that

"RIA should be conducted at an early stage and before a decision to regulate has been taken" 783.

11.7 The European Commission, in reviewing its own use of impact assessments, also notes that:

"Impact assessments need to be conducted earlier in the policy development process so that alternative courses of action can be thoroughly examined before a proposal is tabled"784.

⁷⁸³ See paragraph 2.1 of the Department of An Taoiseach's Revised RIA Guidelines.

⁷⁸⁴ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "Second strategic review of Better Regulation in the European Union", COM(2008) 32 final 30.01.2008, p. 6.

- 11.8 In determining the impacts of the various regulatory options, current best practice appears to recognise that full cost-benefit analysis would only arise where it would be proportionate or in exceptional cases where robust, detailed and independently verifiable data is available. Such comprehensive review may be undertaken by ComReg when necessary and appropriate.
- 11.9 Having regard to the various sets of guidelines, it is clear that the RIA should be introduced as early as possible in the assessment of potential regulatory options, where appropriate and feasible. The consideration of regulatory impact provides a discussion of options, and the RIA should therefore be integrated within the overall preliminary analysis. This is the approach which ComReg is following in this market review. The RIA will be finalised in the final decision document, having taken into account all the responses to this Consultation and any comments from the CCPC and the European Commission.
- 11.10 ComReg now conducts its RIA having regard to its proposed approach to impose (or not) regulatory remedies identified in this Further Consultation, along with a consideration of other options. The following sections, in conjunction with the rest of the analysis and discussion set out elsewhere in this Further Consultation, represent a RIA.
- 11.11 The rest of this section is set out as follows
- (a) First in Section 11.2, ComReg sets out in detail ComReg's approach to the RIA;
 - (b) Then, in Section 11.3 ComReg sets out its consideration of and response to the Submissions received on the RIA Set out in the 2016 Consultation and sets out a further preliminary assessment of the potential impact of the proposed approach to the imposition of regulatory obligations on Eircom in the LB TI WHQA Market and the proposed removal of regulatory obligations in the HB TI WHQA market;
 - (c) In Section 11.4, ComReg then out a preliminary assessment of the potential impact of the proposed approach to the imposition of regulatory obligations on Eircom in the Zone B MI WHQA Market;
 - (d) In Section 11.5, a preliminary assessment of the proposed removal of regulatory obligations in the Zone A MI WHQA Market is detailed; and
 - (e) Finally, Section 11.6 sets out ComReg's overall preliminary conclusions on the RIA.

11.2 Approach to the RIA

11.2.1 Principles in Selecting Remedies

11.12 In Sections 7 and 9 ComReg set out the legislative basis upon which it must consider the imposition of remedies. In choosing remedies, ComReg is obliged, pursuant to Regulation 8(6) of the Access Regulations, to ensure that they are:

- (a) Based on the nature of the problem identified;
- (b) Proportionate and justified in the light of the objectives laid down in Section 12 of the Communications Regulation Acts 2002 (as amended), and Regulation 16 of the Framework Regulations; and
- (c) Only imposed following consultation in accordance with Regulations 12 and 13 of the Framework Regulations.

11.13 Section 12(1)(a) of the Communications Regulation Acts 2002 (as amended) sets out the objectives of ComReg in exercising its functions in relation to the provision of electronic communications networks, electronic communications services and associated facilities, namely:

- (d) To promote competition;
 - (i) To contribute to the development of the internal market; and
 - (ii) To promote the interests of users within the European Union.

Describe the Policy Issue and Identify the Objectives

11.14 In general, the European Commission acknowledges that once SMP is identified in markets which are defined as susceptible to ex ante regulation, then the regulatory framework foresees that at least one regulatory obligation would be imposed to mitigate against the exercise of SMP and to ensure the development of effective competition within and across communications markets. We have noted previously⁷⁸⁵ that the European Commission has established that the WHQA Market is susceptible to ex ante regulation and on this basis ComReg has carried out the preceding analysis in this Further Consultation.

⁷⁸⁵ See paragraph 1.30.

- 11.15 Having regard to the competition problems identified in Sections 6 and 8, ComReg's objectives are to enhance the development of effective competition in relevant downstream markets and to help ensure that consumers can reap maximum benefits in terms of price, choice and quality of service. In so doing, ComReg is seeking to prevent exploitative behaviour and/or restrictions or distortions in competition amongst SPs. ComReg is also seeking to provide regulatory certainty to all SPs through the development of an effective and efficient forward-looking regulatory regime that serves to promote competition.
- 11.16 In pursuing these objectives, ComReg has considered the impact of specific forms of regulation in the LB TI WHQA Market and the Zone B MI WHQA Market. As a result, ComReg is of the preliminary view that the remedies specified in Sections 7 and 9 are both appropriate and justified in light of the market analysis and the identified competition problems. The regulatory options are further considered below.

Identify and Describe the Potential Regulatory Options

- 11.17 ComReg recognises that regulatory measures should be kept to the minimum necessary to address the identified market failure in an effective, efficient and proportionate manner. There are a range of potential regulatory options available to ComReg to address the potential competition problems in the LB TI WHQA Market and the Zone B MI WQHA Market.
- 11.18 In this regard, regulation can be considered to be incremental, such that only obligations are imposed which are necessary and proportionate to the competition problems which have been identified. The lightest measure that can be imposed is the obligation of transparency⁷⁸⁶. Should this be insufficient to address competition problems on its own, ComReg may apply a non-discrimination obligation⁷⁸⁷. If this is still not sufficient, ComReg may next consider the imposition of an access obligation⁷⁸⁸, or accounting separation obligations⁷⁸⁹. The final measure to be considered is the imposition of a price control and cost accounting remedy⁷⁹⁰.

⁷⁸⁶ Regulation 9 of the Access Regulations.

⁷⁸⁷ Regulation 10 of the Access Regulations.

⁷⁸⁸ Regulation 12 of the Access Regulations.

⁷⁸⁹ Regulation 11 of the Access Regulations.

⁷⁹⁰ Regulation 13 of the Access Regulations.

11.19 Given ComReg has identified in Section 5 that no Undertaking is likely to have SMP in the HB WHQA Market and the Zone A MI WHQA Market, ComReg cannot, as a matter of law impose any SMP based regulatory obligations in these markets. However, as noted in Section 10, ComReg has proposed a sunset period of 6 and 12 months respectively for the withdrawal of existing remedies imposed upon Eircom in these markets (subject to the requirements specified).

11.3 Position set out in the 2016 Consultation

11.3.1 Overview

11.20 In Section 10 of the 2016 Consultation, ComReg set out its preliminary RIA. In so doing, ComReg noted that the purpose of a RIA is to establish whether regulation is actually necessary, to identify any possible negative effects which might result from imposing a regulatory obligation and to consider any alternatives. ComReg set out its approach and then conducted its RIA having regard to its proposed approach to imposing (or not) those regulatory remedies in Section 8 of the 2016 Consultation, along with a consideration of other options.

11.21 It should be noted that the preliminary RIA, in conjunction with the rest of the analysis and discussion set out in the 2016 Consultation, set out ComReg's then preliminary assessment of the potential impact of the imposition of the proposed regulatory obligations in the LB TI WHQA Market and of the proposed removal of regulatory obligations in the HB TI WHQA Market and MI WHQA Market. The RIA was set out under the headings below.

The principles adopted by ComReg in selecting remedies

9.454 The 2016 Consultation referred to the legislative basis upon which ComReg must consider the imposition of remedies, including under Regulation 8(6) of the Access Regulations and Section 12(1)(a) of the Communications Regulations Act 2002 (as amended)⁷⁹¹.

⁷⁹¹ See paragraphs 10.11 and 10.12 of the 2016 Consultation.

Description of the policy issue at hand and identify the objectives

11.22 ComReg noted⁷⁹² that it was required to impose at least one regulatory obligation on an operator designated as having SMP in order to mitigate the exercise of SMP and to ensure the effective competition within and across communications markets.

11.23 Given the competition problems in the LB TI WHQA Market identified in section 7 of the 2016 Consultation, ComReg stated that its objectives were to enhance the development of effective competition in relevant downstream markets and ultimately to help ensure that customers can reap maximum benefits in terms of price, choice and quality of service. In so doing, ComReg noted that it was seeking to:

- (a) prevent exploitative/exclusionary behaviours and/or restrictions or distortions in competition amongst SPs; and
- (b) provide regulatory certainty to all SPs through the development of an effective and efficient forward-looking regulatory regime that serves to promote competition.

11.24 In pursuing these objectives, ComReg noted that it had considered the impact of specific forms of regulation in the LB TI WHQA Market and was of preliminary view that the remedies specified in Section 8 of the 2016 Consultation were both appropriate and justified in light of the market analysis and the identified competition problems.

Identify and describe the potential regulatory obligations

11.25 In the 2016 Consultation⁷⁹³, ComReg recognised that regulatory measures should be kept to the minimum necessary to address the identified market failures in an effective, efficient and proportionate manner. A range of potential incremental regulatory options were available to ComReg to address the potential competition problems identified in the LB TI WHQA Market with each of these then being considered.

⁷⁹² See paragraphs 10.13 to 10.15 of the 2016 Consultation.

⁷⁹³ See paragraphs 10.16 to 10.40 of the 2016 Consultation.

11.26 ComReg noted that regulation can be considered to be incremental, such that only those obligations would be imposed which were necessary and proportionate to address the competition problems which have been identified in the 2016 Consultation. ComReg explained that the lightest regulatory obligation that could be imposed on an operator designated as having SMP was a transparency obligation. Should this be insufficient to address competition problems on its own, ComReg noted that it could then apply non-discrimination obligations. If this was still insufficient, ComReg would next consider the imposition of access obligations or accounting separation obligations. The final measure that it would consider is whether to impose price control and cost accounting obligations.

11.27 ComReg described all of these potential measures and then went on to determine the potential impact of its proposed regulatory approach on stakeholders with respect to LB TI WHQA Market.

Determine the Impact on Stakeholders

11.28 ComReg considered⁷⁹⁴ that the option of regulatory forbearance in the LB TI WHQA Market was not appropriate or justified given the potential competition problems identified in the 2016 Consultation and therefore, discounted this option.

11.29 ComReg then considered 4 regulatory options with respect to the LB TI WHQA Market along with the potential impact of each option on stakeholders, namely:

- (a) Option 1: Impose Access obligations only;
- (b) Option 2: Impose Access, Transparency and Non-Discrimination obligations;
- (c) Option 3: Impose Access, Transparency, Non-Discrimination and Price Control & Cost Accounting obligations; and
- (d) Option 4: Impose Access, Transparency, Non-Discrimination, Price Control and Cost Accounting and Accounting Separation obligations.

11.30 In assessing each of the options, ComReg considered the potential impact on Eircom, other SPs and consumers, before then going on to consider the potential impact on competition.

⁷⁹⁴ See paragraphs 10.41 to 10.43 of the 2016 Consultation.

Assess the likely impacts and choose the best option

- 11.31 Having considered its obligations under Regulation 8(6) of the Access Regulations and Section 12(1)(a) of the Communications Regulation Act 2002 (as amended) and, having considered the potential impacts on stakeholders and competition, including the potential impact on the development of competition within the internal market, ComReg's preliminary view was that Option 4 was the most justified, reasonable and proportionate of the suggested approaches to regulation within the LB TI WHQA Market i.e. to impose Access, Transparency, Non-Discrimination, Price Control & Cost Accounting and Accounting Separation obligations⁷⁹⁵.
- 11.32 ComReg considered that Option 4 represented the best means of ensuring that Eircom did not exploit its market power at the wholesale level to the detriment of competition in both upstream and downstream markets, and to the ultimate detriment of consumers.
- 11.33 ComReg noted that Eircom's strong position in both downstream retail LB TI LL market and the LB TI WHQA Market meant that Eircom not only had the ability, but also had an incentive, to engage in vertical leveraging and/or foreclosure type behaviours. For example, to impede downstream competitors through price (e.g. excessive/discriminatory pricing) and/or non-price anti-competitive behaviours.
- 11.34 ComReg reiterated its preliminary view that no Undertaking is likely to have SMP in either HB TI WHQA Market or MI WHQA Market and thus, no regulatory remedies were being imposed in these Markets. ComReg noted that its regulatory options in the HB TI WHQA and MI WHQA Markets were therefore, limited to the timing of the withdrawal of existing regulation.
- 11.35 ComReg considered that a six to nine months sunset period for removal of existing remedies in the HB TI WHQA Market and MI WHQA Market should allow Access Seekers sufficient time to seek alternative WHQA arrangements, if required, and would thereby preserve continuity in the supply of retail/wholesale services (if Eircom were to withdraw or significantly alter its terms and conditions of supply of HB TI WHQA and/or MI WHQA products following deregulation).

⁷⁹⁵ See paragraphs 10.44 to 10.60 of the 2016 Consultation.

11.36 ComReg also proposed that Eircom would no longer be required (pursuant to regulation) to meet new requests for access in HB TI WHQA and/or MI WHQA Markets after the final Decision arising from the Consultation comes into effect. ComReg's preliminary view was that it would be illogical to maintain such a requirement for a short period which, having expired, would then be subject to commercial negotiation. ComReg considered that the removal of existing obligations in HB TI WHQA and MI WHQA Markets facilitated a reduction in Eircom's regulatory burden.

11.3.2 Respondents' Views

11.37 5 out of 12 Respondents expressed views on ComReg's RIA. ALTO, BT, Eircom, Enet and Vodafone disagreed with aspects of RIA.

11.38 In commenting on the RIA, in most cases Respondents repeated views relating to issues which had been the subject of their responses on matters set out and discussed in earlier parts of the Consultation (and have been addressed above in this Further Consultation). For example, views were repeated on issues including market definition and the imposition/withdrawal of remedies.

11.39 ALTO and BT reiterated their views relating to the proposed sunset period and de-regulation of the MI WHQA Market. Both Respondents considered that further engagement with operators and other stakeholders is required in order to assess the impact of withdrawing obligations.

11.40 In relation to proposed obligations in the LB TI WHQA Market, ALTO and BT suggested that ComReg should have also considered an alternative version of Option 4 which would include improved regulatory remedies including EoI standard and Statements of Compliance.

11.41 Enet noted that a RIA is of little relevance given the proposed de-regulation of the MI WHQA Market and urged ComReg to conduct a new RIA following designation of Eircom with SMP in the Relevant WHQA Markets.

11.42 Eircom considered that the approach to the RIA in general was wrong given it was a qualitative discussion and lacked a quantified assessment of the efficiency or cost of ComReg's proposals and noted that a multi-criteria analysis could have been utilised.

- 11.43 Eircom also argued that ComReg has failed to consider options such as self-regulation and co-regulation or how these options would work in conjunction with one or more of the proposed regulatory obligations. Eircom also noted that ComReg has not considered the likelihood of ex-post competition law achieving the same objectives as the proposed Option 4.
- 11.44 Finally, Eircom reiterated its view that the proposed regulatory obligations will impede migration from the LB TI LLs and create artificial demand for these services.
- 11.45 Vodafone considered that ComReg has failed to properly assess the impact of withdrawing obligations through more engagement with operators and other stakeholders and argued that ComReg could have opted to maintain regulation to a set date or designated Eircom with SMP, but apply less stringent obligations.

11.3.3 ComReg's Assessment of Respondents' Views

- 11.46 From the outset ComReg would note that, pursuant to Section 12 of the Communications Regulation Act 2002 (as amended), ComReg's objectives in deciding on an appropriate regulatory approach are (i) to promote competition, (ii) to contribute to the development of the internal market, and (iii) to promote the interests of users within the Community.
- 11.47 ComReg also takes account of those objectives set out in the Framework Regulations and Access Regulations. Regulation 6(1) of the Access Regulations states that ComReg shall encourage and, where appropriate, ensure, in accordance with the Access Regulations, adequate access, interconnection and the interoperability of services in such a way as to: (a) promote efficiency, (b) promote sustainable competition, (c) promote efficient investment and innovation, and (d) give the maximum benefit to end-users. Pursuant to Regulation 6(3) of the Access Regulations, ComReg, has ensured that obligations imposed are objective, transparent, proportionate and non-discriminatory and are applied in accordance with Regulations 12, 13 and 14 of the Framework Regulations.
- 11.48 ComReg is also mindful of the need to ensure a consistent regulatory approach, and to ensure that there is no discrimination in the treatment of Undertakings providing electronic communications networks and services. Furthermore, ComReg only imposes ex ante regulatory obligations where there is no effective and sustainable competition, pursuant to Regulation 16 of the Framework Regulations.

11.49 In paragraphs 11.37 to 11.45 above, ComReg summarised the key issues raised by Respondents concerning ComReg's RIA. ComReg now considers Respondents' views according to the themes identified below:

- (a) Alternative options in determining a range of appropriate remedies in the LB TI WHQA Market were not considered (discussed in paragraphs 11.51 to 11.52 below);
- (b) Insufficient quantitative analysis in RIA (discussed in paragraph 11.53 below); and
- (c) The impact of withdrawal of regulatory obligations was not assessed sufficiently (discussed in paragraphs 11.57 below).

11.50 However, where, Respondents have repeated views which they had already raised in relation to earlier parts of the analysis set out in the 2016 Consultation, ComReg has addressed those views in the relevant section of this Further Consultation. For example, ComReg addresses views already raised by Respondents in relation to the definition of the Relevant WHQA Markets in Section 4 of this Further Consultation; views raised in relation to the imposition of particular remedies in the LB TI WHQA Market in section 8 of this Further Consultation; and views on the withdrawal of remedies and the appropriate sunset period in Section 10 of this Further Consultation.

Alternative options in determining a range of appropriate remedies in the LB TI WHQA Market were not considered

11.51 In its Submission, Eircom was of the view that ComReg did not consider other alternative approaches to remedies, such as self-regulation and/or co-regulation. In this regard, ComReg would point out that its assessment of competition in the LB TI WHQA market was conducted in accordance with the Modified Greenfield Approach and that in the absence of the imposition of regulation, Eircom is likely to have SMP in this market. Furthermore, in accordance with the Framework Regulations, ComReg is obliged to impose one or more regulatory obligations on an SMP Undertaking, with such obligations identified in Regulation 9 to 12 of the Access Regulations. The efficacy of the appropriate regulatory obligations were then considered in detail in the RIA that accompanied the 2016 Consultation.

11.52 Furthermore, in relation to the efficacy of ex post competition law to address the identified competition problems, the WHQA market is one that is considered by the European Commission to be susceptible to ex ante regulation, and as such, is identified where ex post competition law would not likely be sufficient to address the competition problems identified. As noted in the 2016 Consultation⁷⁹⁶ Competition law applied on an ex post basis is often unsuitable in preventing certain competition problems such as excessive pricing, and this is evidenced by the scarcity of successful ex-post excessive pricing cases within EU jurisprudence. An ex-post approach to excessive pricing in markets such as the LB TI WHQA Market which is characterised by a lack of effective competition and high and non-transitory entry barriers, is not likely to offer adequate protection for consumers or promote effective competition. This is because addressing such issues through competition law approaches (if it is proven to the required competition law standard) would likely occur substantially after the occurrence of the competition problem itself, thereby contributing to significant uncertainty amongst downstream market participants in the interim and undermining the development of effective competition to the detriment of consumers.

Insufficient quantitative analysis in RIA

11.53 In its Submission, Eircom was of the view that the 2016 Consultation lacked a quantified assessment of the efficiency or cost of ComReg's proposals and noted that a multi-criteria analysis could have been utilised.

11.54 As noted in the 2016 Consultation, in determining the impacts of the various regulatory options, current best practice appears to recognise that full cost-benefit analysis would only arise where it would be proportionate or in exceptional cases where robust, detailed and independently verifiable data is available. ComReg does not consider that this is the case for its analysis.

11.55 ComReg notes that the 2016 Consultation and this Further Consultation both explore, in detail, the suitability of different regulatory approaches for the Relevant WHQA Markets. As such, the overall analysis considers the likely and potential impacts of various regulatory options taking account of the specific characteristics of the Relevant WHQA Markets. Therefore, this RIA forms part of a broader regulatory impact assessment which extends throughout a number of sections in the 2016 Consultation and this Further Consultation.

⁷⁹⁶ See paragraph 7.15, for example.

11.56 The 2016 Consultation and this Further Consultation thus incorporate a full and objective assessment of the various regulatory options available for the Relevant WHQA Markets. As part of that assessment, ComReg has undertaken detailed analysis of the specific structure and characteristics of the Relevant WHQA Markets and a graduated impact assessment of potential regulatory options for addressing each of the specific problems identified (however a formal cost benefit analysis is not necessary). This RIA should, therefore, be read in conjunction with the analysis in the 2016 Consultation and this Further Consultation as a whole.

The impact of withdrawal of regulatory obligations was not assessed sufficiently

11.57 ALTO, BT, Enet and Vodafone all raised concerns that ComReg had not properly assessed the impact of the removal of regulation from the MI WHQA Market in particular. In this regard, ComReg would note that it engaged with Respondents and other stakeholders both through and after the publication of the 2016 Consultation and has taken further account of the impact in its more granular assessment of the geographic scope of the MI WHQA Markets in Section 4 and is of the further preliminary view that there is a separate Zone A MI WHQA Market and Zone B MI WHQA Market. In Section 5 ComReg has proposed that no Undertaking has SMP in the Zone A MI WHQA Market. Section 11.4 below sets out the RIA in relation to this market.

11.3.4 ComReg's Preliminary Position in relation to the RIA on regulation in the LB TI WHQA Market

11.58 In paragraphs 11.46 to 11.57 above ComReg has considered Respondents' views on the RIA set out in the 2016 Consultation and considers that the RIA that accompanied the 2016 Consultation remains appropriate and identifies the impact of imposing regulation in the LB TI WHQA Market and removing it from the HB TI WHQA Market

11.59 As discussed above, since ComReg has designated Eircom with SMP in the LB TI WHQA Market, ComReg is required to impose appropriate remedies in that market. In light of the nature of those competition problems that would be likely to arise absent of regulation, ComReg considers that Option 4 identified in paragraph 11.29 represents the most justified, reasonable and proportionate of the available regulatory approaches. Thus, ComReg's reasoned preliminary position is that the imposition of Access, Transparency, Non-Discrimination, Price Control and Cost Accounting and Accounting Separation obligations on Eircom is appropriate for the period of this review.

11.60 As discussed above, ComReg is of preliminary position that continued regulation in the HB TI WHQA is no longer warranted because no SP has SMP in this market. In Section 10 ComReg has set out its preliminary position that a six month sunset period for the removal of existing regulation in the HB TI WHQA Market is appropriate.

11.4 RIA in the Zone B MI WHQA Market

11.61 In Section 4 of this Further Consultation, ComReg set out its preliminary view on the definition of Zone B MI WHQA Market, followed by an assessment in Section 5 of competition within this market. ComReg consequently proposes to designate Eircom with SMP in the Zone B MI WHQA Market, as set out in Section 5. In Section 8 ComReg considered, on the basis of a preliminary SMP finding, the potential for competition problems to arise in the Zone B MI WHQA Market over the review period in question. As noted in Section 9, in order to address the identified competition problems in the Zone B MI WHQA Market, ComReg is required to impose on Eircom one or more (as appropriate) of the obligations (or remedies) set out below:

- (a) Access;
- (b) Transparency;
- (c) Non-Discrimination;
- (d) Price Control and Cost Accounting; and/or
- (e) Accounting Separation.

11.62 First, ComReg must consider the question of regulatory forbearance, and then incremental imposition of one or more of the obligations outlined above.

11.4.1 Forbearance

- 11.63 In the case of the current analysis of the Zone B MI WHQA Market, ComReg is required⁷⁹⁷ to impose at least some level of regulation on Eircom, having been designated as having SMP. Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations requires ComReg to impose at least some level of regulation on Undertakings ultimately designated as having SMP. In Section 5, ComReg set out its preliminary view that Eircom has SMP in the Zone B MI WHQA Market. In Section 8, ComReg identified a range of competition problems that could occur in the Zone B MI WHQA Market, absent regulation.
- 11.64 In Section 8, ComReg set out its view that, absent regulation, Eircom has the ability and incentive to engage in exploitative and/or exclusionary behaviour in the Zone B MI WHQA Market (and related markets). In view of this, absent the imposition of any remedies within the Zone B MI WHQA Market, it is ComReg's view that such markets would not likely function effectively. For example, access could be effectively refused or materially delayed (resulting in certain consumers not being able to use retail MI LLs (or other) services or having to incur the additional costs in accessing such services). In addition, the price for MI WHQA LLs may be set above the level that would pertain in a competitive outcome and/or Eircom may be in a position to distort competition in other markets, such as the retail MI LL market. As highlighted in this Section, it is ComReg's preliminary view that the option of regulatory forbearance in the Zone B MI WHQA Market is not, therefore, appropriate or justified. By not imposing any regulatory obligations on Eircom, ComReg would be acting contrary to its own regulatory obligations, as per Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations, once SMP has been identified ComReg is obliged to impose at least one regulatory remedy.

11.4.2 Transparency Obligations

- 11.65 As noted in Section 1.2.1 above Eircom has previously been designated with SMP under the 2008 Decision and is currently subject to transparency obligations in that market.

⁷⁹⁷ Per Regulation 8(1) of the Access Regulations.

- 11.66 ComReg's preliminary view in Section 9 is that Eircom should be required to comply with transparency obligations in order to minimise information asymmetries and, therefore, facilitate effective access to WHQA LLs and promote effective competition in related and downstream markets. In Section 8 ComReg identified competition problems which, absent regulation, could potentially arise in the Zone B MI WHQA Market (and related markets). The competition problems identified included inter alia potentially excessive and/or discriminatory pricing, as well as a potential for outright or constructive (e.g. through protracted negotiations on terms and conditions) refusal to supply with a view to extracting prices above efficient cost and/or distorting competition in related markets. In this regard, ComReg is proposing that, as part of a general transparency obligation pursuant to Regulation 9 of the Access Regulations, Eircom shall be required to publish a LLRO setting out the contractual terms and conditions and technical basis upon which Service Providers can obtain access to MI WHQA LLs. It is further proposed to require Eircom publish wholesale prices and to provide advance notice of price/product changes to ComReg and to other SPs.
- 11.67 ComReg recognises that the LLRO and other transparency obligations may require some slightly increased level of implementation. However, as the LLRO is effectively the standard offer of contract for MI WHQA LL products, services and associated facilities which Eircom has already largely published, ComReg is of the preliminary view that the incremental level of implementation associated with publishing such standard contracts and in meeting the other transparency obligations should be relatively contained.
- 11.68 ComReg is also requiring Eircom to continue to provide information to SPs regarding its roll out plans, as well as information relating to wholesale MI WHQA products, services, and facilities such as the expected time for service availability. While ComReg has given some further specificity to the detail such obligations they largely mirror existing obligations. In any event, ComReg considered that such enhanced obligations are necessary and justified.
- 11.69 Furthermore, as detailed in Section 9 above, ComReg is proposing to require that Eircom submit to ComReg a written Statement of Compliance adequately demonstrating its compliance with all of its regulatory obligations. While ComReg discusses this obligation here in the context of transparency obligations, it applies with respect to all of its other obligations.

11.70 ComReg has considered whether transparency obligations alone would be sufficient to address the competition problems identified in Section 8 and does not consider this to be the case. For example, problems *inter alia* associated with excessive pricing, discriminatory behaviour (on price or non-price grounds) and/or impeded or delayed access would not be capable of being adequately addressed through transparency obligations alone.

11.4.3 Non-Discrimination Obligations

11.71 The principle of non-discrimination is designed to ensure that Undertakings with market power do not distort competition, in particular, where they are vertically-integrated Undertakings that supply services to Undertakings with whom they compete on downstream markets. As discussed in Section 8 a potential competition problem arises when an integrated operator has SMP in one market which has links with other adjacent markets either at a similar (horizontal) or different (vertical) level in the production or distribution chain. In such circumstances the SMP operator may attempt to transfer (leverage) its market power to such horizontally or vertically related markets. This could enable the SMP operator to strengthen its position in those related markets and potentially also reinforce its existing market power in the SMP market in question.

11.72 As noted in Section 9⁷⁹⁸, Eircom currently has an obligation of non-discrimination with respect to the provision of MI WHQA LLs and additional associated facilities.

11.73 In Section 8 ComReg identified that Eircom has the ability and incentive to engage in such behaviour which can impact upon downstream competition and consumers. For example, Eircom could offer different access products or service quality to different buyers. Equally so, Eircom could treat Access Seekers differently to its own retail subscribers. As a consequence, ComReg proposes to require that Eircom is subject to non-discrimination obligations, including in respect of Zone B MI WHQA prices or other charges and ensure that access and information are provided to all other Undertakings under the same conditions as Eircom provides to itself or to its downstream retail arm.

⁷⁹⁸ See paragraph 9.17.

11.74 ComReg has considered whether non-discrimination obligations alone would be sufficient to address the competition problems identified in Section 8 and does not consider this to be the case. For example, excessive/discriminatory pricing, outright or constructive denial of access problems, delaying tactics or poor service quality issues could inter alia still remain in the presence of a transparency obligation. Therefore, the imposition of non-discrimination obligations is both proportionate and justified having regard to the competition problems identified.

11.4.4 Access Obligations

11.75 An access obligation gives SPs the right to request access to MI WHQA LL products and associated facilities and establishes the principles on which the relevant products and services should be made available. As noted in Section 9⁷⁹⁹, Eircom has a range of access obligations currently imposed upon it by virtue of its existing designation with SMP in the 2008 Decision. These include obligations to negotiate in good faith with Undertakings requesting access; not withdraw access to facilities already granted and continue to provide such facilities in accordance with existing terms and conditions and specifications; and meet reasonable requests for access to specified network elements, facilities or both such elements and facilities.

11.76 ComReg's preliminary view is that such obligations to provide MI WHQA LL products, services and facilities, which largely mirror existing obligations, are both proportionate and justified in view of the competition problems identified. ComReg has considered whether obligations other than those relating to access would in themselves resolve the competition problems identified and does not consider this to be the case. Similarly, the imposition of access obligations on their own also would not likely prevent all possible forms of exploitative/exclusionary behaviour in the Zone B MI WHQA Market such as excessive pricing, discrimination (on price or quality grounds) or ensure transparency of terms and conditions of access.

⁷⁹⁹ See paragraphs 9.13 to 9.16.

11.4.5 Price Control and Cost Accounting Obligations

- 11.77 The purpose of price control and cost accounting obligations is to ensure that prices charged are not set above efficient cost and to promote efficiency and sustainable retail competition while maximising consumer benefits. As noted in Section 1.2.1, Eircom is currently subject to a price control obligation of cost orientation and cost accounting pursuant to the 2008 Decision and the 2012 Pricing Decision.
- 11.78 In the review of competition problems in Section 8, ComReg considered on a forward-looking basis the scope for competition problems to arise absent the imposition of price control and cost accounting obligations. Furthermore, Section 8 identifies a number of competition, efficiency and ultimately consumer impacts arising from MI WHQA LL prices that are set above efficient cost.
- 11.79 ComReg has proposed that Eircom should be subject to a cost-orientation obligation with respect to various access products, service and facilities. ComReg's analysis, set out in Section 8, indicates that Eircom has the ability and incentive to engage in excessive pricing in the provision of access in the Zone B MI WHQA Market, absent regulation.
- 11.80 In general, if specific price control obligations are to be meaningful, it may be necessary to have a clear and comprehensive understanding of the costs associated with Eircom's provision of WHQA products, services and facilities. ComReg proposes to continue to impose a cost accounting obligation on Eircom having regard to its integrated position across several markets (in particular noting its SMP designations in a number of these markets). In the discussion of competition problems in Section 8, Eircom was identified as having particular ability and incentives to leverage its SMP position from the Zone B MI WHQA Market into related markets. There is thus, still a need to ensure sufficient visibility of how costs are allocated across the Zone B MI WHQA market and other horizontally and vertically-related inputs. As Eircom is already subject to a cost accounting obligation across a number of regulated markets, including the Zone B MI WHQA market, ComReg considers any incremental burden is minimal.
- 11.81 ComReg has considered whether price control obligations alone would be sufficient to address the competition problems identified in Section 8, and does not consider this to be the case. For example, discriminatory behaviour (on price or non-price grounds) or denial of access problems would not be capable of being adequately addressed through such obligations alone.

11.4.6 Accounting Separation Obligations

- 11.82 As noted in Section 9, in general, the purpose of an accounting separation obligation would be to provide a higher level of detail of information than that which can be derived from the statutory financial statements of Undertakings designated with SMP, with the objective of reflecting, as closely as possible, the performance of those parts of the Undertaking's business were it to operate on a standalone basis. In the case of vertically-integrated Undertakings, it can support non-discrimination obligations and prevent unfair cross-subsidies to other services.
- 11.83 Eircom currently has an obligation to maintain separated accounts pursuant to the 2008 Decision and the 2012 Accounting Separation Decision. In Section 8, ComReg has identified potential competition problems associated with possible price-related leveraging to be particularly pertinent in the case of Eircom (absent regulation) which highlights the importance of continuing to ensure a transparent and effective mechanism of accounting separation.
- 11.84 Having regard to Eircom's integrated position across several related markets (in particular noting its SMP designations in a number of these markets), separated accounts help disclose such possible competition problems and make visible the wholesale and internal transfer prices of a dominant operator's services, thereby facilitating transparency as regards any potential misallocation of costs across different services. The main objective of accounting separation is to make the practical implementation of non-discrimination and cost-orientation transparent by showing cross-subsidisation between products. Requiring separated accounts for the main products and services creates more transparency on internal transfer pricing and repartition of common and joint costs. It is therefore considered proportionate and justified to continue to impose an obligation on Eircom to maintain separated accounts

11.4.7 Determine the Impacts on Stakeholders

- 11.85 Given that ComReg has proposed to designate Eircom with SMP in the Zone B MI WHQA Market, it is ComReg's preliminary view, as outlined paragraphs 11.63 to 11.64 above, that the option of regulatory forbearance is not appropriate or justified and can be discounted when considering the impact on stakeholders.

- 11.86 Having regard to the proposed SMP designation in Section 5 (which requires ComReg to impose at least some level of regulation⁸⁰⁰) as well as the review of competition problems and remedies in Sections 8 and 9 respectively, ComReg has, on an incremental basis, identified why a range of appropriate remedies are necessary, proportionate and justified, while at the same time discounting other remedies where appropriate.
- 11.87 Having regard to the analysis and assessment of the Zone B MI WHQA Market, ComReg has now groups remedies into four options for the purpose of considering the incremental impact of each option on stakeholders:
- (a) **Option 1:** Impose Access obligations only;
 - (b) **Option 2:** Impose Access, Transparency and Non-Discrimination obligations;
 - (c) **Option 3:** Impose Access, Transparency, Non-Discrimination and Price Control and Cost Accounting obligations;
 - (d) **Option 4:** Impose Access, Transparency, Non-Discrimination, Price Control & Cost Accounting and Accounting Separation obligations.

⁸⁰⁰ Pursuant to Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations.

Option 1: Impose Access Obligations only		
Impact on Eircom	Impact on Competition	Impact on Consumers
<p>Eircom would benefit from reduced regulatory burden relative to 2008 Decision.</p> <p>There would be increased flexibility for Eircom to use its market power at wholesale level to engage in exploitative behaviour and/or influence market developments at the wholesale/retail level. It could facilitate extraction of excessive rents from Zone B MI WHQA purchasers and ultimately end-users.</p> <p>Eircom's incentives to innovate and increase efficiency may be reduced where prices are set above efficient cost are paid for by competitors and, in turn, by their customers.</p> <p>Increased risk of disputes and legal challenges involving Eircom's Zone B MI WHQA services arising from ineffective transparency and other preventative measures to protect against non-discrimination. Disputes could increase legal and regulatory costs faced by Eircom.</p>	<p>High risk that, even though access mandated in principle, there would be significant scope for it to be effectively undermined through such practices as high or discriminatory pricing, imposing unreasonable terms and conditions, delaying tactics, poor service quality, etc.</p> <p>Where access is provided to downstream competitors on exploitative or discriminatory terms (relative to that provided to Eircom's own retail arm) this could significantly disadvantage existing rivals and distort existing competition in downstream markets.</p> <p>Ineffective access to Zone B MI WHQA could also raise barriers to expansion for existing entrants in downstream markets due to inability to guarantee end-to-end connectivity to Eircom's established customer base.</p> <p>Zone B MI WHQA prices set above efficient cost would raise financial barriers to entry and expansion for smaller or newer entrants in downstream retail and wholesale markets.</p> <p>Where Zone B MI WHQA prices are set above efficient cost, this could limit scope for downstream pricing innovations by Eircom's downstream rivals.</p> <p>Scope would persist for Eircom to squeeze competitors across related wholesale/retail markets through its relative pricing of Zone B MI WHQA.</p> <p>Regulatory certainty is reduced given wholesale access and pricing uncertainty. A potentially increased incidence of disputes could also raise legal and regulatory costs for Eircom's rivals.</p> <p>Differences in regulatory approach between Ireland and other EU countries and deviations from European Commission guidance could</p>	<p>There would be a risk that, even though access to Zone B MI WHQA is mandated, there would be significant scope for it to be effectively undermined through such practices as high or discriminatory pricing, unreasonable terms and conditions, delaying tactics, poor service quality, etc.</p> <p>If downstream competition is distorted or investments discouraged due to ineffective Zone B MI WHQA access, consumers would potentially have reduced service choice, quality and innovation.</p> <p>Above-cost Zone B MI WHQA could put upward pressure (or slow the rate of any decline) on retail prices. Above-cost Zone B MI WHQA may also limit scope for retail pricing innovations thereby potentially depriving consumers of bundles/packages.</p>

Option 1: Impose Access Obligations only

	also generate legal uncertainty for pan-European operators.	
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Option 2: Impose Access, Transparency and Non-Discrimination Obligations		
Impact on Eircom	Impact on Competition	Impact on Consumers
<p>Eircom would benefit from a reduced regulatory burden relative to 2008 Decision.</p> <p>There would be increased flexibility for Eircom to use its market power at wholesale level to engage in exploitative behaviour and/or influence market developments at the wholesale/retail level. It could facilitate extraction of excessive rents from Zone B MI WHQA purchasers and ultimately end-users. Eircom's incentives to innovate and increase efficiency may be reduced where Zone B MI WHQA prices set above efficient cost are paid for by competitors and, in turn, by their customers.</p> <p>While risk of disputes and legal challenges involving Eircom's Zone B MI WHQA services might be eased somewhat relative to Option 1, risk of disputes would persist due to lack of direct regulatory oversight in respect of Eircom's Zone B MI WHQA prices. Disputes could increase the legal and regulatory costs faced by Eircom.</p>	<p>While risk of impeding access to Zone B MI WHQA may be moderated somewhat relative to Option 1, effective access to Zone B MI WHQA may still be undermined through excessive Zone B MI WHQA pricing (including in circumstances where Eircom is vertically integrated).</p> <p>Where access is provided to downstream competitors on exploitative terms, this could significantly disadvantage existing rivals and distort existing competition in downstream markets.</p> <p>Ineffective access to Zone B MI WHQA (through exploitative or exclusionary pricing) could also raise barriers to expansion for existing competitors in downstream markets. Regulatory certainty is improved although remains reduced given wholesale pricing uncertainty. A potentially increased incidence of disputes could also raise legal and regulatory costs for Eircom's rivals.</p> <p>Differences in regulatory approach between Ireland and other EU countries (broader set of obligations are generally envisaged by other NRAs) and deviations from European Commission guidance could also generate legal uncertainty for pan-European operators considering investments in Ireland.</p>	<p>There would be a risk that, even though Zone B MI WHQA is mandated in principle, there would be significant scope for it to be effectively undermined through such practices as excessive pricing, and ultimately consumers would be impacted (through say, higher prices). If downstream competition is distorted or investments discouraged due to ineffective Zone B MI WHQA access, consumers would potentially have reduced service choice, quality and innovation.</p> <p>Above-cost Zone B MI WHQA prices could put upward pressure (or slow the rate of any decline) on retail prices. Above-cost Zone B MI WHQA prices would also limit scope for retail pricing innovations thereby potentially depriving consumers of new and innovative bundles/packages involving fixed data (and other) services.</p>

Option 3: Impose Access, Transparency, Non-Discrimination and Price Control & Cost Accounting Obligations		
Impact on Eircom	Impact on Competition	Impact on Consumers
<p>As Eircom is currently subject to price control and cost accounting obligations (including cost orientation) pursuant to the 2008 Decision, the incremental burden of such obligations is not likely to be significant.</p> <p>Cost orientation ensure that Eircom can recovers its efficiently incurred cost plus a reasonable rate of return.</p> <p>Eircom's regulatory burden under Option 3 would not be significantly less than under Option 4 (below) as Eircom is already subject to accounting separation obligations in other SMP markets. Under Option 3 there would be increased flexibility for Eircom to obscure internal transfer prices and the real costs of Zone B MI WHQA if no accounting separation obligation imposed. There would thus be an increased opportunity for Eircom's non-discrimination and/or price control obligations to be undermined.</p> <p>Risk of disputes and legal challenges involving Eircom's Zone B MI WHQA prices may be eased relative to Options 1 and 2 due to price control obligation. However, a lack of adequate cost accounting data may generate uncertainty regarding Eircom's compliance with non-discrimination and price control obligations, thus also contributing to risk of disputes.</p>	<p>Regulating Zone B MI WHQA prices at efficient cost would reinforce the effectiveness of the access, transparency and non-discrimination obligations thus reducing risk of competitive distortions in downstream retail markets and potentially lowering barriers to expansion for SPs.</p> <p>Regulating Zone B MI WHQA prices at efficient cost would potentially provide greater scope for retail pricing innovations by rivals.</p> <p>Greater consistency with EU guidance and other regulatory decisions would promote legal certainty and a more predictable environment. While greater certainty that Zone B MI WHQA prices would be set at efficient cost potentially moderates risk of disputes relative to Options 1 and 2, the lack of transparency of Eircom's costs due to absence of a cost accounting systems may still contribute to an ineffective cost orientation price control and scope for discrimination (relative to its own retail arm) and consequent risk of disputes.</p>	<p>Availability of Zone B MI WHQA access would facilitate interoperability of services by enabling subscribers of other networks to call Eircom's subscribers.</p> <p>Reduced risk of competitive distortions and more level playing field in downstream markets and greater wholesale pricing certainty helps facilitate retail price and service innovations (e.g. in terms of packages/bundles offered).</p> <p>Reduced risk of high Zone B MI WHQA prices being passed through to end-users in form of higher prices relative to Options 1 and 2 above.</p> <p>Potential for discriminatory behaviour due to lack of accounting separation may impact on downstream competition and investment with consequent negative implications in terms of price and service choice over time.</p>

Option 4: Impose Access, Transparency, Non-Discrimination, Price Control & Cost Accounting and Accounting Separation Obligations		
Impact on Eircom	Impact on Competition	Impact on Consumers
Existing regulatory burden on Eircom as per the 2008 Decision would remain. Risk of disputes and legal challenges involving Eircom's Zone B MI WHQA prices would be eased relative to Options 1, 2 and 3.	As set out for Option 3 above, greater consistency with EU guidance and other regulatory decisions would promote legal certainty and a more predictable environment for potential investors. Greater certainty that Zone B MI WHQA prices would be set at efficient cost, complemented by greater visibility of internal transfers to support non-discrimination obligation, moderates risk of disputes relative to Options 1, 2 and 3.	Reduced risk of competitive distortions and more level playing field in downstream markets and greater wholesale pricing certainty helps facilitate retail price and service innovations (e.g. in terms of packages/bundles offered). Reduced risk of above-cost Zone B MI WHQA prices being passed through to end-users in form of higher prices relative to Options 1 and 2 above.

11.4.8 Assess the Likely Impacts and Choose the Best Option

- 11.88 In the discussion on the proposed approach on remedies set out in Section 9, ComReg has taken full account of its obligations under Regulation 8(6) of the Access Regulations (including that any proposed remedies are to be based on the nature of the problem identified), as well as its relevant objectives as set out under Section 12 of the Communications Regulation Acts 2002 (as amended).
- 11.89 ComReg's preliminary view is that, absent regulation, there is the potential and incentive for Eircom, as the SP designated with SMP in the Zone B MI WHQA Market, to engage in exploitative and exclusionary behaviours which would impact on competition and consumers. In Section 8 ComReg provided examples of potential competition problems and the impact of these on competition and consumers. ComReg has also highlighted its objectives in regulating the Zone B MI WHQA Market in paragraph 11.13 above, in particular, preventing restrictions or distortions of competition in affected downstream retail and wholesale markets and helping to ensure that consumers can achieve maximum benefits in terms of price, choice and quality of service.
- 11.90 The imposition of appropriate ex ante remedies to address such competition problems was discussed and justified in Section 9 and each of the specific remedies is designed to promote the development of effective competition and to protect end-users. Given that a full suite of remedies is proposed to be applied on Eircom, it is ComReg's belief that the risk of competition problems and associated impacts should be minimised. This will ultimately be to the benefit of Service Providers and end-users of downstream retail and wholesale services.
- 11.91 The proposed maintenance of existing regulation on Eircom in the Zone B MI WHQA Market (i.e. Option 4) is considered justifiable in that it is required to ensure that Eircom does not exploit its market power at the wholesale level to the detriment of competition in both related markets, and to the ultimate detriment of consumers. In Section 8, a broad range of potential competition problems were identified for Eircom, which has the ability and incentives for both exploitative and exclusionary practices given its continuing significant presence in upstream and downstream markets.

11.92 In particular, Eircom's strong position on downstream retail markets (see Section 3 of this Consultation) implies that the ability and incentives to engage in vertical leveraging/foreclosure would seem particularly strong for Eircom. In view of its control over a number of key input markets, Eircom has the ability and incentives to impede downstream competitors through price (e.g. excessive/ discriminatory pricing) and/or non-price means (e.g. by not facilitating access to essential services in the Zone B MI WHQA Market). The regulatory obligations proposed in designed to specifically address the competition problems identified and are proportionate in that they are the least burdensome means of achieving this objective.

11.5 Zone A MI WHQA Market Considerations

11.93 As set out in Section 5, ComReg is of the preliminary view that no Undertaking is likely to have SMP in the Zone A MI WHQA Market. As a result, no regulatory obligations are being imposed on any SP in this market.

11.94 At present, Eircom is regulated in the Zone A MI WHQA Market area by virtue of the 2008 Decision. As a result of the analysis contained in this Further Consultation, it is proposed that existing regulatory obligations on Eircom will be withdrawn in the Zone A MI WHQA Market (see Section 10 above). In particular, ComReg's preliminary view is that high and non-transitory barriers to entry no longer appear to be present, and that the Zone A MI WHQA Market is tending towards effective competition. ComReg's preliminary finding that no Undertaking is likely to have SMP in the Zone A MI WHQA Market implies that the market is no longer susceptible to ex ante regulation and, therefore, regulation is not warranted.

11.95 On that basis, the removal of regulation from the Zone A MI WHQA Market has been proposed. Therefore, ComReg's regulatory options in the Zone A MI WHQA Market are limited to the timing of the withdrawal of existing regulation. As noted in Section 10, ComReg has proposed a sunset period of 12 months for the withdrawal of existing remedies imposed upon Eircom in the Zone A MI WHQA Market.

- 11.96 This will, amongst other things, allow Access Seekers sufficient time to seek alternative forms of Zone A MI WHQA supply, if required, and thereby preserve continuity in the supply of retail/wholesale services (were Eircom to withdraw, or significantly alter, its terms and conditions of Zone A MI WHQA supply following deregulation). To ultimately ensure the protection of consumer interests, ComReg also proposes to continue to monitor the effectiveness of competition within the Zone A MI WHQA Market, notwithstanding the proposed removal of regulation. In this respect, ComReg reserves its right to re-examine competitive conditions within the Zone A MI WHQA Market and, if appropriate, to intervene accordingly.
- 11.97 ComReg also proposes that, within three months from the effective date of the final decision arising from this Further Consultation, Eircom will no longer have to meet new requests for access in the Zone A MI WHQA Market in the context of regulatory requirements (although is free to do so commercially). Seekers will require some time to make alternative supply arrangements and, in view of this, where access to MI WHQA LLs is not available immediately after such a decision, they will not be in a position compete for tenders/bids already underway. On the other hand, requiring Eircom to meet new access requests during the sunset period would not be ultimately sustainable in circumstances where post the twelve month sunset period Eircom is free to withdraw access to all MI WHQA LL services (although it may wish to continue to do so on a commercial basis). On balance, ComReg considers, therefore, that it is reasonable to require Eircom to provide new MI WHQA access requests for a very short period of 3 months following ComReg's decision.

11.5.1 Conclusion on RIA in Zone A MI WHQA Market

- 11.98 Given regulatory obligations cannot be imposed in the Zone A MI WHQA Market (aside from the limited obligations regarding the proposed sunset period), this RIA does not further consider regulatory options with respect to the Zone A MI WHQA.

11.6 Overall Preliminary Conclusion on the RIA for the Relevant WHQA markets

- 11.99 ComReg is still of the preliminary view that the RIA accompanying the 2016 Consultation properly assesses the impact of the imposition of regulation in the LB TI WHQA market and its removal in the HB TI WHQA market and so it remains unchanged.

11.100 Furthermore, ComReg's RIA on the impact of the imposition of regulation in the Zone B MI WHQA market and its removal in the Zone A MI WHQA market has been considered above.

Question 10: Do you agree with ComReg's preliminary conclusions on the Regulatory Impact Assessment for the MI WHQA Markets? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your position.

12 Next Steps

- 12.1 The consultation period will run until the 4th of April 2018 and all comments on the issues set out in this Further Consultation are welcome.
- 12.2 The task of analysing responses received will be made easier if all comments are referenced to the specific question numbers as set out previously in this Further Consultation and summarised in Appendix: 7.
- 12.3 Having analysed and considered the comments received, ComReg will review the proposals set out in this Further Consultation, maintain or amend its proposals, as appropriate, including with respect to the draft measures set out in the Draft Decision Instrument at Appendix: 4 below.
- 12.4 Having regard to Regulation 27(1) of the Framework Regulations, ComReg will consult with the Competition and Consumer Protection Commission on its preliminary views on the Relevant WHQA Market(s).
- 12.5 ComReg will then notify its final draft measures to the European Commission, other NRAs and BEREC, pursuant to Regulation 13 of the Framework Regulations. Taking utmost account of any comments received from the European Commission as well as from the other aforementioned parties, ComReg will then seek to adopt and publish the final decision in its subsequent Response to Consultation and Decision.
- 12.6 In order to promote further openness and transparency, ComReg will publish all responses to this Further Consultation (including any correspondence received in the course of the consultation and prior to the issue of the final decision), subject to the provisions of ComReg's guidelines on the treatment of confidential information in ComReg Document No. 05/24.⁸⁰¹ ComReg appreciates that many of the issues raised in this Further Consultation may require Respondents to provide confidential information if their comments are to be meaningful.

⁸⁰¹ Guidelines on the Treatment of Confidential Information, Response to Consultation, [ComReg Document 05/24](#), March 2005.

- 12.7 As it is ComReg's policy to make all responses available on its website and for inspection generally, Respondents to this Further Consultation are requested to clearly identify confidential material as described in Section 1.7 above. Such material will be treated subject to the provisions of ComReg's guidelines on the treatment of confidential information as set out in ComReg Document No. 05/24.
- 12.8 In submitting comments, Respondents are also requested to provide a copy of their submissions in an unprotected electronic format in order to facilitate their subsequent publication by ComReg.

Appendix: 1 TERA Report

A 1.1 The TERA Report [non-confidential version] is published with this further consultation as a separate document, ComReg Document number 18/08a. This has been partially redacted due to confidentiality requirements.

Appendix: 2 Map of Ireland, Zones A and B

A 2.1 A map of Ireland showing the Zones A MI WHQA Market and Zone B MI WHQA Market is available to view on the ComReg website at the following link:

<https://siteviewer.comreg.ie/ComReg1808b>

A 2.2 This allows users to search the map based on address, Small Area ID and customer name, where the customer location has been identified on google maps. A google earth klm version of the map may be made available upon request to interested parties upon request.

Appendix: 3 List of Small Areas, Zones A and B

A 3.1 A list of the CSO Small Areas is published as a separate document, namely in ComReg Document 18/08b, in spreadsheet form. Each area is identified as belonging to either Zone A or Zone B.

Appendix: 4 Draft Decision Instrument for the LB TI WHQA Market and the Zone B MI WHQA Market

1. STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

- 1.1 This Decision Instrument (“Decision Instrument”) is made by the Commission for Communications Regulation (“ComReg”) and relates to the market(s) for wholesale high quality access provided at a fixed location as identified by the European Commission in the 2014 Recommendation and analysed by ComReg in ComReg Document No. 16/69, ComReg Document No. 18/08 [This Further Consultation Document] and ComReg Document No. 18/XX [Final Decision Document], and defined by ComReg in ComReg Decision DXX/18.
- 1.2 This Decision Instrument is made:
- (i) Pursuant to and having had regard to Sections 10 and 12 of the Communications Regulation Act 2002 (as amended);
 - (ii) Pursuant to and having had regard to Regulation 6(1) of the Access Regulations and Regulation 16 of the Framework Regulations;
 - (iii) Having taken the utmost account of the 2014 Recommendation, the Explanatory Note and the SMP Guidelines;
 - (iv) Having, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), where applicable, complied with Ministerial Policy Directions;
 - (v) Having had regard to the analysis and reasoning set out in ComReg Document No. 16/69, ComReg Document No. 18/08 [This Further Consultation Document] and ComReg Document No. 18/XX [Final Decision Document], and having taken account of the submissions received from interested parties in response thereto following a public consultation pursuant to Regulation 12 of the Framework Regulations;
 - (vi) Having consulted with the Competition and Consumer Protection Commission pursuant to Regulation 27 of the Framework Regulations;

- (vii) Having notified the draft measure and the reasoning on which the measure is based to the European Commission, BEREC and the national regulatory authorities in other European Union Member States pursuant to Regulations 13 and 14 of the Framework Regulations and having taken utmost account of any comments made by these parties;
 - (viii) Pursuant to Regulations 25, 26 and 27 of the Framework Regulations and Regulations 8, 9, 10, 11, 12, and 13 of the Access Regulations; and
 - (ix) Having regard to the analysis and reasoning set out in ComReg Decision [DXX/18].
- 1.3 The provisions of ComReg Document No. 16/69, ComReg Document No. 18/08 [This Further Consultation Document] and ComReg Document No. 18/XX [Final Decision Document], and ComReg Decision [DXX/18] shall, where appropriate, be construed consistently with this Decision Instrument.
- 1.4 To the extent that there is any conflict between a decision instrument dated prior to the Effective Date and this Decision Instrument, this Decision Instrument shall prevail.

PART I - GENERAL PROVISIONS (SECTIONS 2 TO 5 OF THE DECISION INSTRUMENT)

2. DEFINITIONS

- 2.1 In this Decision Instrument, unless the context otherwise suggests:
- “Access”** shall have the same meaning as under Regulation 2 of the Access Regulations, as may be amended from time to time;
- “Access Regulations”** means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011), as may be amended from time to time;
- “Access Seeker”** means an Undertaking (or other authorised operator) that purchases, or could potentially purchase, WHQA Services;
- “Analogue Leased Line”** means a leased line with an analogue (2 or 4 wire) interface;
- “Associated Facilities”** shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;
- “BAFO”** means Best and Final Offer
- “BEREC”** means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EC) No. 1211/2009 of the European Parliament and of the Council of 25 November 2009;

“Bottom Up Long Run Average Incremental Cost plus” or “BU-LRAIC+” means the methodology used to estimate the “LRAIC plus” of an efficient operator which is derived from an economic and/or engineering model of an efficient network. The LRAIC plus costs are the average efficiently incurred directly attributable variable and fixed costs, including an appropriate apportionment of joint and common costs;

“Channelised E1 (2Mb/s) Access” means the Eircom wholesale service which combines multiple sub 2Mb/s circuits onto a single 2Mb/s circuit;

“Communications Regulation Act 2002 (as amended)” means the Communications Regulation Act 2002 (No. 20 of 2002), as amended;

“ComReg” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act 2002 (as amended);

“ComReg Decision D06/08” means ComReg Document No. 08/103 entitled “Market Analysis – Leased Line Market Review: Response to Consultation on Draft Decision Instrument Final Decision Notice and Decision Instrument”, dated 22 December 2008;

“ComReg Decision D03/09” means ComReg Document No. 09/65 entitled “Response to Consultation Document and Final Decision – Response to Consultation Document No. 09/11: Review of the regulatory asset lives of Eircom Limited”, dated 11 August 2009;

“ComReg Decision D02/10” means ComReg Document No. 10/12 entitled “Lease Lines Markets: Review of Urban Centres – Response to Consultation 09/86 and Final Decision”, dated 15 February 2010;

“ComReg Decision D08/10” means ComReg Document No. 10/67 entitled “Response to Consultation Document and Final Direction and Decision, Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting Review of Eircom Limited”, dated 31 August 2010;

“ComReg Decision D02/11” means ComReg Document No. 11/22 entitled “Response to Consultation and Final Decision – Amendments to the transparency obligation and the access obligation in the market for wholesale terminating segments of leased lines”, dated 22 March 2011;

“ComReg Decision D05/11” means ComReg Document No. 11/45 entitled “Response to Consultation and Decision on the Introduction of Key Performance Indicators for Regulated Markets”, dated 29 June 2011;

“ComReg Decision D02/12” means ComReg Document No. 12/03 entitled “Response to Consultation Document No. 10/70 and 11/32 – A final decision further specifying the price control obligation in the market for wholesale terminating segments of leased lines”, dated 2 February 2012;

“ComReg Decision D12/13” means ComReg Document No. 13/75 entitled “Leased Line Markets: Further review of Urban Centres – Final Decision and Response to Consultation”, dated 29 July 2013;

“ComReg Decision D05/15” means ComReg Document No. 15/82 entitled “Market Review, Wholesale Fixed Voice Call Origination and Transit Markets, Response to Consultation and Decision”, dated 24 July 2015;

“ComReg Decision DXX/18” means ComReg Document No. 18/XX, entitled [TITLE TO BE INSERTED] [the Final Decision, which is the subject of this Further Consultation and yet to be published];

“ComReg Document No. 05/24” means ComReg Document No. 05/24 entitled “Response to Consultation, Guidelines on the treatment of confidential information, Final text of Guidelines”, dated 22 March 2005;

“ComReg Document No. 16/69” means ComReg Document No. 16/69, entitled “Market Review: Wholesale High Quality Access at a Fixed Location, Consultation and Draft Decision”, dated 18 August 2016;

“ComReg Document No. 17/26” means ComReg Document No. 17/26, entitled “Pricing of Wholesale Services in the Wholesale Local Access (WLA) market and Wholesale Central Access (WCA) markets: Further Specification of Price Control Obligations in Market 3a (WLA) and Market 3b (WCA) – Consultation and Draft Decision”, dated 7 April 2017;

“ComReg Document No. 18/08” means ComReg Document No. 18/08, entitled “Market Review: Wholesale High Quality Access at a Fixed Location, Response to Consultation and Further Consultation” [This Further Consultation Document];

“ComReg Document No. 18/XX” means ComReg Document No. 18/XX, entitled [TITLE TO BE INSERTED] [the Final Decision Document, which is the subject of this Further Consultation and yet to be published];

“Co-Location” shall have the same meaning and description as under Part B “Co-location services” of the Schedule to the Access Regulations (as may be amended from time to time), save that it includes for the purposes of this Decision Instrument, access to the main distribution frame (MDF) and/or to the optical distribution frame (ODF), floor space, Alternating Current (AC) power, Direct Current (DC) power air conditioning, mast access, roof access, cable trays and trunking as applicable, at an Eircom Exchange;

“Co-Location Rack Interconnection” means Interconnection between two or more co-location equipment racks belonging to two or more separate Undertakings’;

“Co-Location Resource Sharing” means the facility whereby an Undertaking (the first Undertaking) is permitted to share the resources (including space, power) allocated to that first Undertaking by Eircom in an Exchange with another Undertaking (the second Undertaking) to which Eircom is also providing Access to products, services and facilities;

“Competition and Consumer Protection Commission” formerly the Competition Authority and the National Consumer Agency;

“Customer-Sited Handover” or **“CSH”** means that Eircom provides the transmission path from the Eircom Exchange or node to the Access Seeker’s premises, without the requirement for the Access Seeker to extend its network;

“E1 Channelised Link” means a 2Mb/s timeslot on a Transport Link used for delivery sub 2Mb/s End User Links;

“Effective Date” means the date set out in Section 26 of this Decision Instrument;

“EFM” mean Ethernet First Mile;

“Eircom” means Eircom Limited, and its subsidiaries and any related companies, and any Undertaking which it owns or controls, and any Undertaking which owns or controls Eircom Limited, and its successors and assigns. For the purpose of this Decision Instrument, the terms “subsidiary” and “related company” shall have the meaning ascribed to them in the Companies Act 2014 (as may be amended from time to time);

“Electronic Communications Network(s)” or **“ECN(s)”** shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;

“Electronic Communications Service(s)” or **“ECS(s)”** shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;

“End User” shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time. For the avoidance of doubt, End User(s) shall be deemed to include any natural or legal person who facilitates or intends to facilitate the provision of public communications networks or publicly available electronic communications services to other End Users and who is not acting as an Undertaking;

“End User Link” or **“EUL”** means an End User Link as defined in Eircom’s PPC Product Description; **“Equivalence of Outputs”** means the provision of products, services, facilities, and information by the SMP Undertaking to OAOs such that such products, services, facilities, and information are provided to OAOs in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP Undertaking provides to itself, albeit potentially using different systems and processes;

“ENH” means Edge Node Handover;

“(the) Explanatory Note” means the Commission Staff Working Document: Explanatory Note accompanying the 2014 Recommendation (9 October 2014, SWD (2014) 298;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), as may be amended from time to time;

“High Bandwidth TI WHQA” means wholesale leased lines provided over wired infrastructure over a TDM interface at bandwidths greater than 2Mb/s;

“IBH” means In-Building Handover;

“In-Span Handover” or **“ISH”** means the connection between the Eircom Exchange or node and the Access Seeker’s nominated Point of Handover. In this instance the Access Seeker extends its network to a point close to the Eircom node (this can be in an underground chamber for example;

“Interconnection” shall have the same meaning as under Regulation 2 of the Access Regulations, as may be amended from time to time;

“Interconnection Service(s)” includes CSH, IBH, ISH, and ENH;

“Kb/s” means kilobit(s) per second;

“Key Performance Indicator(s)” or **“KPI(s)”** means a measure(s) of the standard(s) of product, service or facility provided by Eircom to Undertakings and by Eircom to itself;

“Leased Line” means a service that involves the supply of dedicated transmission capacity between fixed locations. Leased Lines and WHQA are used interchangeably in this document;

“Leased Lines Reference Offer” or **“LLRO”** is the latest version of the offer of contract by Eircom to OAOs in relation to wholesale leased lines (but which may from time to time be amended). For the avoidance of doubt the LLRO includes the documents which are expressly referred to in the LLRO as being part of the LLRO. To the extent that there is any conflict between the LLRO and Eircom’s obligations now set out herein, it is the latter which shall prevail;

“LLRO Change Matrix” means the table of information collated by Eircom which specifies the non-price related amendments made to its LLRO, including the date(s) on which such amendments come into effect;

“LLRO Price List Change Matrix” means the table of information collated by Eircom which specifies the amendments made to the LLRO Price List(s) which are contained in its LLRO, including the date(s) on which such amendments come into effect;

“LLRO Price List(s)” means the list of charges collated by Eircom for products, services and facilities which are to be provided and specified in its LLRO in accordance with the requirements of this Decision Instrument;

“Long Run Average Incremental Cost plus” or **“LRAIC+”** means the average efficiently incurred directly attributable variable and fixed costs, plus an appropriate apportionment of joint and common costs;

“Low Bandwidth TI WHQA” means wholesale leased lines provided over wired infrastructure over a TDM interface at bandwidths less than or equal to 2Mb/s;

“Mb/s” means megabit(s) per second;

“MI WHQA” means wholesale leased lines, irrespective of bandwidth, provided over wired infrastructure over modern interfaces such as Ethernet, EFM, xWDM and other such high bandwidth interfaces;

“Ministerial Policy Directions” for the purposes of this Decision Instrument means the policy directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004;

“OSS” means operational support systems;

“Other Authorised Operator(s)” or **“OAO(s)”** means an Undertaking that is not Eircom, providing or intending to provide an ECN or an ECS pursuant to Regulation 4 of the Authorisation Regulations;

“PPC” means Private Partial Circuit as defined in Eircom’s product descriptions;

“Product Development Roadmap” means is a list of all proposed future developments for a particular product family;

“(the) Relevant Markets” means the markets described in Section 4 of this Decision Instrument;

“Revision History” means a documented list of changes to the Statement of Compliance as required under Section 20 of this Decision Instrument. The list, which contains the changes from the previous draft of the Statement of Compliance, should be maintained and printed in a dedicated and indexed section of each Statement of Compliance;

“Service Credit(s)” means a financial credit which is provided by Eircom to an OAO where Eircom has failed to meet the service levels which Eircom commits to from time to time in its SLA;

“Service Level Agreement(s)” or **“SLA(s)”** mean legally binding contracts between Eircom and OAOs in relation to the service levels which Eircom commits to from time to time, as more particularly set out in the LLRO. For the avoidance of doubt, however, to the extent that there is any conflict between the SLAs and Eircom’s obligations set out in this Decision Instrument, it is the latter which shall prevail;

“Shared Services within or between Co-location Racks” means the facility whereby an Undertaking is permitted to share the services allocated to that Undertaking by Eircom in an Exchange with another Undertaking that the Undertaking is providing access services to;

“Significant Market Power obligation(s)” or **“SMP obligation(s)”** are those obligations as more particularly described in Part II below, as may be amended from time to time;

“(the) SMP Guidelines” means the European Commission guidelines of 11 July 2002 on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C165/03) (OJ C 165, 11.7.2002, p.6);

“Significant Market Power Undertaking” or **“SMP Undertaking”** means the Undertaking designated in Section 5 of this Decision Instrument as having Significant Market Power;

“Structured Information” means information that is documented and managed through an established business process in a formal manner and includes memos, email messages, letters, order forms, invoices, agendas and reports *et al*;

“TDM” means Time Division Multiplexing;

“Transport Link” means a TDM based Interconnection Service used to deliver EULs as defined in Eircom’s product description⁸⁰²;

“Undertaking(s)” shall have the same meaning as under Regulation 2 of the Framework Regulations, as may be amended from time to time;

“Unstructured Information” means information that is managed in an informal manner;

“Version Control” means a standardised regime for the management of changes to documents as it relates to Section 20 of this Decision Instrument. Different versions of the Statement of Compliance should be identified by a number, letter or code, associated with a date and timestamp. Revision History is included as part of the Version Control regime;

“WEIL” means Wholesale Ethernet Interconnection Link;

“WES” means Wholesale Ethernet Service;

⁸⁰² Partial Private Circuit Product Description, V3.0, 23/06/2017.

<http://www.openeir.ie/WorkArea/DownloadAsset.aspx?id=4736>.

“**WHQA**” means a service that involves the supply of dedicated transmission capacity between fixed locations. WHQA and Leased Lines are used interchangeably in this document;

“**WSEA**” means Wholesale Symmetrical Ethernet Access Product;

“**xWDM**” means Wavelength-Division Multiplexing;

“**Zone A**” means that area comprising of those XXX small areas set out in Appendix XX of ComReg Decision DXX/18;

“**Zone B**” means that area comprising of those XXX small areas set out in Appendix XX of ComReg Decision DXX/18;

“**(the) 2014 Recommendation**” means the European Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 295, 11.10.2014, p. 79).

3. SCOPE AND APPLICATION

- 3.1 This Decision Instrument is binding upon Eircom and Eircom shall comply with it in all respects.
- 3.2 This Decision Instrument applies to Eircom in respect of activities falling within the scope of the Relevant Market(s) defined in Section 4 of this Decision Instrument.

4. MARKET DEFINITION

- 4.1 This Decision Instrument relates to the wholesale market(s) for high quality access provided at a fixed location as identified by the European Commission in the 2014 Recommendation and analysed by ComReg in ComReg Document No. 16/69, ComReg Document No. 18/08 [This Further Consultation Document] and ComReg Document No. 18/XX [Final Decision Document], and defined by ComReg in ComReg Decision DXX/18. For the purposes of this Decision Instrument, ComReg identifies four separate markets as more particularly defined in Section 4.2 below (referred to in this Decision Instrument singularly as the Relevant National Low Bandwidth Traditional Interface Wholesale High Quality Access Market, the National High Bandwidth Traditional Interface Wholesale High Quality Access Market, the Zone A Modern Interface Wholesale High Quality Access Market and the Zone B Modern Interface Wholesale High Quality Access Market; referred to collectively as the Relevant Markets).

- 4.2 Pursuant to Regulation 26 of the Framework Regulations and in accordance with the 2014 Recommendation, the Explanatory Note and taking the utmost account of the SMP Guidelines, in accordance with the principles of competition law, the Relevant Markets defined in this Decision Instrument are:
- (i) the National Low Bandwidth Traditional Interface Wholesale High Quality Access Market (“the (Relevant) Low Bandwidth TI WHQA Market”);
 - (ii) the National High Bandwidth Traditional Interface Wholesale High Quality Access Market (“the (Relevant) High Bandwidth TI WHQA Market”); and
 - (iii) the Zone A Modern Interface Wholesale High Quality Access Market (“the (Relevant) Zone A MI WHQA Market”);
 - (iv) the Zone B Modern Interface Wholesale High Quality Access Market (“the (Relevant) Zone B MI WHQA Market”).

5. MARKET ASSESSMENT AND SIGNIFICANT MARKET POWER (“SMP”)

- 5.1 It is hereby decided that the Relevant Low Bandwidth TI WHQA Market is susceptible to *ex ante* regulation.
- 5.2 It is hereby decided that the Relevant High Bandwidth TI WHQA Market is not susceptible to *ex ante* regulation.
- 5.3 It is hereby decided that the Relevant Zone A MI WHQA Market is not susceptible to *ex ante* regulation.
- 5.4 It is hereby decided that the Relevant Zone B MI WHQA Market is susceptible to *ex ante* regulation.
- 5.5 Pursuant to Regulation 25 and Regulation 27 of the Framework Regulations and taking the utmost account of the SMP Guidelines, having determined that the Relevant Low Bandwidth TI WHQA Market is not effectively competitive, Eircom is designated as having SMP in the Relevant Low Bandwidth TI WHQA Market.
- 5.6 Pursuant to Regulation 25 and Regulation 27 of the Framework Regulations and taking the utmost account of the SMP Guidelines, having determined that the Relevant High Bandwidth TI WHQA Market is effectively competitive, no operator is designated as having SMP in the Relevant High Bandwidth TI WHQA Market.

- 5.7 Pursuant to Regulation 25 and Regulation 27 of the Framework Regulations and taking the utmost account of the SMP Guidelines, having determined that the Relevant Zone A MI WHQA Market is effectively competitive, no operator is designated as having SMP in the Relevant Zone A MI WHQA Market.
- 5.8 Pursuant to Regulation 25 and Regulation 27 of the Framework Regulations and taking the utmost account of the SMP Guidelines, having determined that the Relevant Zone B MI WHQA Market is not effectively competitive, Eircom is designated as having SMP in the Relevant Zone B MI WHQA Market.

PART II - SMP OBLIGATIONS (SECTIONS 6 TO 12 OF THE DECISION INSTRUMENT) IN RELATION TO LOW BANDWIDTH TRADITIONAL INTERFACE WHOLESALE HIGH QUALITY ACCESS

6. SMP OBLIGATIONS IN RELATION TO LOW BANDWIDTH TI WHOLESALE HIGH QUALITY ACCESS PRODUCTS, SERVICES AND FACILITIES

- 6.1 ComReg is imposing certain SMP obligations on Eircom in accordance with and pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations, as detailed further in Sections 7 to 12 below in respect of the Relevant Low Bandwidth TI WHQA Market, excluding Analogue Leased Lines, Digital Leased Lines (also known as Wholesale Leased Lines) and Channelised E1 (2MB) access. In this Part II, references to the Low Bandwidth TI Wholesale High Quality Access Market shall at all times exclude Analogue Leased Lines, Digital Leased Lines (also known as Wholesale Leased Lines) and Channelised E1 (2MB) products.

7. OBLIGATIONS TO PROVIDE ACCESS

- 7.1 Pursuant to Regulation 12(1) of the Access Regulations, Eircom shall meet all reasonable requests from Undertakings for the provision of Access to Low Bandwidth TI WHQA products, services and Associated Facilities.
- 7.2 Without prejudice to the generality of Section 7.1 of this Decision Instrument and pursuant to Regulation 12(2) of the Access Regulations, Eircom shall provide and grant Access to Undertakings for the following particular Low Bandwidth TI WHQA products, services and Associated Facilities:-

Partial Private Circuit leased lines, consisting of:

- a. End User Links of bandwidths 64kb/s up to and including bandwidths of 2Mb/s; and
- b. Interconnection Services, in particular Transport Links, including In-Span Handover and Customer Sited Handover variants.

- 7.3 Without prejudice to the generality of Sections 7.1 and 7.2 of this Decision Instrument, Eircom shall offer and continue to offer and provide Access to the products, services and facilities referred to in Sections 7 and/or 8 of this Decision Instrument in accordance with the product descriptions and terms and conditions of supply or use, as specified in the current version of the LLRO (i.e. LLRO version N, dated 21 June 2017, as published on Eircom's wholesale website) as may be amended from time to time, and, in addition, in accordance with Eircom's obligations under this Decision Instrument.
- 7.4 Without prejudice to the general obligations set out in Sections 7.1 to 7.3, of this Decision Instrument, Eircom shall:
- (i) pursuant to Regulation 12(2)(b) of the Access Regulations, negotiate in good faith with Undertakings requesting Access;
 - (ii) pursuant to Regulation 12(2)(c) of the Access Regulations, not withdraw Access to products, services and facilities already granted without the prior approval of ComReg and in accordance with terms and conditions as may be determined by ComReg;
 - (iii) pursuant to Regulation 12(2)(e) of the Access Regulations, grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities;
 - (iv) pursuant to Regulation 12(2)(h) of the Access Regulations, provide Access to OSS or similar software systems necessary to ensure fair competition in the provision of services (being those products, services and facilities described in this Section 7).

8. CONDITIONS ATTACHED TO THE ACCESS OBLIGATION

- 8.1 Pursuant to Regulation 12(3) of the Access Regulations, Eircom shall, in relation to the obligations set out in Section 7 above, grant Undertakings Access in a fair, reasonable and timely manner.
- 8.2 Without prejudice to the generality of Section 8.1 above, pursuant to Regulation 12(3) of the Access Regulations, Eircom shall:
- (i) conclude, maintain and update, as appropriate, legally binding SLAs with Undertakings, which shall include committed service levels and ensure an efficient level of performance;
 - (ii) negotiate in good faith with Undertakings in relation to the conclusion of legally binding and fit-for-purpose SLAs (either in the case of a new SLA or an amendment to an existing SLA) ;

- (iii) ensure that SLAs include provision for Service Credits to be provided by Eircom to Access Seekers in the event that committed service levels are not met; ensure that SLAs specify the circumstances that trigger the payment of Service Credits, such as, but not limited to, a failure by Eircom to achieve committed service levels, or the occurrence of certain specified events (such as, but not limited to, incidents of service outage or deterioration), and/or other such criteria as appropriate
 - (iv) ensure that SLAs detail the methodology for the calculation of Service Credits and shall include the provision of an example calculation;
 - (v) ensure that the application of Service Credits, where they occur, shall be applied automatically and in a timely and efficient manner; and
 - (vi) ensure that the level of the Service Credits are fair and reasonable.
- 8.3 For the avoidance of doubt, the access obligations set out in this Section 8 shall apply irrespective of the electronic communications service that the requested access product, service or facility shall be used to provide. The purpose for which the access request is made is not limited to the provision of services to End Users.

9. OBLIGATION OF NON-DISCRIMINATION

- 9.1 Pursuant to Regulation 10 of the Access Regulations, Eircom shall have an obligation of non-discrimination in respect of the provision of Access, including Access as regards those services, products and facilities described in Sections 7 and/or 8 of this Decision Instrument. Without prejudice to the generality of the foregoing, Eircom shall:
- (i) apply equivalent conditions in equivalent circumstances to other Undertakings requesting, or being provided with Access (including Access to those products, services and facilities described in Sections 7 and/or 8 of this Decision Instrument) or requesting or being provided with information in relation to such Access; and
 - (ii) provide Access (including Access to those products, services and facilities described in Sections 7 and/or 8 of this Decision Instrument) and information in relation to such Access to all other Undertakings under the same conditions and of the same quality as Eircom provides to itself or to its subsidiaries, affiliates or partners.

- 9.2 Without prejudice to the generality of Section 9.1 above, Eircom shall (unless otherwise specified in this Decision Instrument) provide Access, including Associated Facilities, to those products, services and facilities required in accordance with Sections 7 and/or 8 of this Decision Instrument on, at least, an Equivalence of Outputs basis.
- 9.3 Without prejudice to the generality of Section 9.1, the obligations contained therein shall apply irrespective of whether or not a specific request for services or information has been made to Eircom by an Undertaking.

10. OBLIGATION OF TRANSPARENCY

- 10.1 Pursuant to Regulation 9 of the Access Regulations, Eircom shall be subject to an obligation of transparency in relation to Access (including Access to those products, services and facilities described in Sections 7 and/or 8 of this Decision Instrument).
- 10.2 Without prejudice to the generality of Section 10.1 of this Decision Instrument, pursuant to Regulation 9(2) of the Access Regulations, Eircom shall make publicly available and keep updated on its website, a LLRO and an associated Price List.
- 10.3 The LLRO shall be sufficiently unbundled so as to ensure that Undertakings availing of Access (including Access to those products, services and facilities described in Sections 7 and/or 8 of this Decision Instrument) are not required to pay for products, services or facilities which are not necessary for the Access requested.
- 10.4 Without prejudice to the generality of Section 10.3 of this Decision Instrument, and in accordance with the obligations specified elsewhere in this Decision Instrument, Eircom shall ensure that its LLRO includes at least the following:
- (i) a description of the offer of contract for Access (including Access to those products, services and facilities described in Sections 7 and/or 8 of this Decision Instrument) broken down into components according to market needs;
 - (ii) a description of any associated contractual or other terms and conditions for supply of Access (including Access to those products, services and facilities described in Sections 7 and/or 8 of this Decision Instrument) and use, including prices;

- (iii) a description of the technical specifications and network characteristics of the Access (including Access to those products, services and facilities described in Sections 7 and/or 8 of this Decision Instrument) being offered; and
- (iv) the terms, conditions, Service Level Agreements, guarantees and other product related assurances associated with Low Bandwidth TI WHQA products, services and facilities.

10.5 In the event of any conflict between the LLRO and associated documentation such as the LLRO Price List (including where represented as updated for the purposes of this Decision Instrument), and Eircom's obligations as set out under this Decision Instrument, it is the latter which shall prevail.

10.6 Without prejudice to the generality of Sections 10.1 and 10.2 above and pursuant to Regulation 9 of the Access Regulations Eircom shall:

- (i) continue to publish and keep updated on its publicly available website, its LLRO in the same form and format as version N, dated 21 June 2017, as may be amended from time to time, insofar as those products, services or facilities contained therein relate to the obligations set out in this Decision Instrument;
- (ii) publish and keep updated on its publicly available website both clean (or unmarked) and tracked changed (or marked) versions of its LLRO (insofar as it relates to the products, services and facilities to be provided in accordance with the requirements of this Decision Instrument). The tracked change version of the LLRO shall be sufficiently clear to allow Undertakings to clearly identify all actual and proposed amendments from the preceding version of its LLRO;
- (iii) publish and keep updated on its publicly available website an accompanying LLRO Change Matrix which lists all of the amendments incorporated or to be incorporated in any amended LLRO;
- (iv) publish and keep updated on its publicly available website both clean (unmarked) and tracked changed (marked) versions of the LLRO Price List(s) (insofar as it relates to the products, services and facilities to be provided in accordance with the requirements of this Decision Instrument). The tracked change version of the LLRO Price List shall be sufficiently clear to allow Undertakings to clearly identify all actual and proposed amendments from the preceding version of its LLRO Price List;
- (v) publish and keep updated on its publicly available website a LLRO Price List Change Matrix; and

- (vi) maintain and make publicly available on its wholesale website a copy of historic versions of its LLRO, LLRO Price List, LLRO Change Matrix and LLRO Price List Change Matrix.
- 10.7 Eircom shall ensure that its wholesale invoices are sufficiently disaggregated, detailed and clearly presented such that an Undertaking can reconcile invoices to Eircom's LLRO and LLRO Price Lists.
- 10.8 Eircom Shall invoice Access Seekers on a monthly basis, one month in advance of the provision of the relevant service, with credit terms set at thirty (30) calendar days.
- 10.9 In respect of both pricing and non-pricing amendments or changes to the LLRO resulting from either the offer of a new product, service or facility which falls with the scope of the Relevant Low Bandwidth TI WHQA Market or a change to an existing product, service or facility which falls within the scope of the Relevant Low Bandwidth TI WHQA Market, the following obligations will apply:
- (i) Eircom shall, unless otherwise agreed by ComReg, make publicly available and publish on Eircom's publicly available wholesale website at least three (3) months in advance of their coming into effect, any proposed amendments or changes to the LLRO or the LLRO Price List(s).
 - (ii) Eircom shall notify ComReg in writing with the information to be published at least five (5) working days in advance of any such publication taking place, that is, three (3) months and five (5) working days prior to any amendments or changes coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion.
- 10.10 Eircom shall, as specified by ComReg in writing from time to time, make publicly available on its wholesale website, information such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices, in respect of the products, services and facilities referred to in Sections 7 and/or 8 of this Decision Instrument.

10.11 Pursuant to Regulation 9(3) of the Access Regulations, ComReg may issue directions requiring Eircom to make changes or amendments to its SLAs, the LLRO (and its associated documents), LLRO Price List, LLRO Change Matrix or LLRO Price List Change Matrix to give effect to obligations imposed by this Decision Instrument and to publish such documents with such changes. In accordance with Regulation 18 of the Access Regulations, ComReg may issue directions to Eircom from time to time requiring it to publish information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use and prices.

10.12 Eircom shall publish Key Performance Indicators (KPIs) on its publicly available wholesale website. The specification of the content of the KPIs shall be in accordance with the obligations set out in ComReg Decision D05/11 (as may be amended from time to time). Pursuant to Regulations 8, 9 and 18 of the Access Regulations, the sections of Annex 4 of the Decision Instrument contained in ComReg Decision D05/11 titled “Metrics associated with Supply of Services”, “Metrics associated with Designation of Service Orders” and “Metrics associated with Repair of Services” are withdrawn and replaced with the following:

“Metrics associated with leased line Services in the Low Bandwidth TI markets

All figures shall be calculated by Eircom for each Data Collection Period. The figures for each Data Collection Period shall be calculated as described below. They will apply as relevant to each individual metric as laid out in the associated tabature form.

Metric Reference	Title	Definition
5.1.1 to 5.1.3	Percentages of fault on PPC EULs of bandwidths up to 2Mb/s, repaired within 8, 24 and after 24 hours (excludes non-faults and co-op faults)	Percentage of faults (excludes non-faults and co-op faults) reported on PPC EUL's ≤2Mb/s repaired within 8, 24 and after 24 hours, of all faults reported, measured on a quarterly basis
5.1.4 to 5.1.6	Percentages of fault on retail digital TDM leased lines of bandwidths up to 2Mb/s, repaired within 8, 24 and after 24 hours (excludes non-faults and co-op faults)	Percentage of faults (excludes non-faults and co-op faults) reported on retail digital TDM leased lines ≤2Mb/s reported, repaired within 8, 24 and after 24 hours, of all faults reported, measured on a quarterly basis

- 10.13 Pursuant to Regulations 8, 9 and 18 of the Access Regulations, Tables 5, 6, 7, 8 and 9 of Appendix 2 of the Decision Instrument contained in ComReg Decision D05/11 are withdrawn and replaced with the following:

Metrics associated with Fault Repair	Retail			Wholesale		
	<8 WHs	<24 WHs	>24WHs	<8 WHs	<24 WHs	>24WHs
Low Bandwidth ($\leq 2\text{Mb/s}$) TDM Leased Lines	%	%	%	%	%	%

Table 5: Repair of Low Bandwidth TDM Lines

- 10.14 Eircom shall on a quarterly basis, publish on its publicly available wholesale website, a report that evidences actual performance achieved in respect of all Undertakings on an aggregate basis compared to the committed service levels contained in the relevant SLA for the products, services and facilities referred to in Sections 7 and/or 8 of this Decision Instrument. Eircom shall also include in the report the methodology and a description of the source data used to determine the actual performance achieved. The report shall also describe how the source data was processed by Eircom and include worked examples as to how the processed source data relates to the actual performance achieved.
- 10.15 Eircom shall make publicly available on its wholesale website all SLAs (and any updates thereto) relating to the provision of the products, services and facilities that are to be provided in accordance with Sections 7 and/or 8 of this Decision Instrument.
- 10.16 Where Eircom considers certain aspects of information to be provided under the obligations set out in this Section 10 to be of a confidential and/or commercially sensitive nature, Eircom shall, without delay, provide ComReg with complete details of such information along with objective reasons justifying why it considers that information is confidential and/or commercially sensitive. ComReg will consider the information in accordance with ComReg Document No. 05/24. If ComReg considers that the information is not confidential and/or commercially sensitive, it shall be published by Eircom in accordance with its obligations under this Section.

- 10.17 If ComReg concludes that the information is confidential and/or commercially sensitive, Eircom shall publish general details as to the nature of such information and shall make it available to an OAO that has signed a Non-Disclosure Agreement (“NDA”), the terms and conditions of which shall be fair, reasonable and non-discriminatory. The NDA shall also be published on Eircom’s publicly available website. Any confidential and/or commercially sensitive information referred to in Section 10.16 above shall not be made available by Eircom to its downstream operations until such time as it is made available to an OAO, or as otherwise agreed with ComReg.
- 10.18 If and when the commercially sensitive and/or confidential information referred to in Sections 10.16 and 10.17 above ceases to be commercially sensitive and/or confidential, it shall be made available by Eircom on its publicly available wholesale website without undue delay and without the need for an NDA to be signed.
- 10.19 For the avoidance of doubt, the obligations set out in this Section 10 apply irrespective of whether or not a specific request for products, services, facilities or information has been made by an Undertaking to Eircom.

11. OBLIGATION OF ACCOUNTING SEPARATION

- 11.1 Pursuant to Regulation 11 of the Access Regulations, Eircom shall have an obligation to maintain separated accounts in respect of the products, services and facilities falling within the scope of this Decision Instrument and the Low Bandwidth TI WHQA Market. All of the obligations in relation to accounting separation, set out at Annexes 1 and 2 of ComReg Decision D08/10, applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument, and relating to products, services and facilities falling within the scope of this Decision Instrument and the Low Bandwidth TI WHQA Market shall be maintained in their entirety.

12. OBLIGATIONS RELATING TO PRICE CONTROL AND COST ACCOUNTING

- 12.1 Pursuant to Regulation 13(1) of the Access Regulations, Eircom shall maintain appropriate cost accounting systems in respect of products, services and facilities described in Sections 7 and/or 8 of this Decision Instrument.
- 12.2 Pursuant to Regulation 13(1) of the Access Regulations, the prices offered or charged by Eircom to any Undertaking for Access to, or use of, the products, services or facilities described in Sections 7 and/or 8 of this Decision Instrument shall be cost orientated.

- 12.3 Pursuant to and in accordance with Regulation 13 of the Access Regulations, the prices offered or charged by Eircom to any Undertaking for any product, service or facilities described in Sections 7 and/or 8 of this Decision Instrument shall be calculated using a BU-LRAIC+ cost model, as described in Chapter 8 of ComReg Document No. 16/69.
- 12.4 Without prejudice to the generality of Section 12.2, pursuant to Regulation 13 of the Access Regulations, Eircom shall ensure that it recovers no more than its actual incurred costs adjusted for efficiencies (plus a reasonable rate of return) in respect of connection fees for any product, service and/or facility described in Sections 7 and/or 8 of this Decision Instrument.
- 12.5 Without prejudice to the generality of Sections 12.2, 12.3 and 12.4 above the prices offered or charged by Eircom to any Undertaking for any product, service or facilities described in Sections 7 and/or 8 of this Decision Instrument shall be no higher than the prices prevailing for those products, services or facilities on the day before the Effective Date.

PART III - SMP OBLIGATIONS (SECTIONS 13 TO 20 OF THE DECISION INSTRUMENT) IN RELATION TO ZONE B MODERN INTERFACE WHOLESALE HIGH QUALITY ACCESS

13.SMP OBLIGATIONS IN RELATION TO ZONE B MI WHOLESALE HIGH QUALITY ACCESS PRODUCTS, SERVICES AND FACILITIES

- 13.1 ComReg is imposing certain SMP obligations on Eircom in accordance with and pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations, as detailed further in Sections 14 to 20 below in respect of the Relevant Zone B MI WHQA Market.

14.OBLIGATIONS TO PROVIDE ACCESS

- 14.1 Pursuant to Regulation 12(1) of the Access Regulations, Eircom shall meet all reasonable requests from Undertakings for the provision of Access to MI WHQA products and services including Associated Facilities.
- 14.2 Without prejudice to the generality of Section 14.1 of this Decision Instrument and pursuant to Regulation 12(2) of the Access Regulations, Eircom shall provide and grant Access to Undertakings for the following particular products, services and Associated Facilities:-

All MI WHQA products, services and associated facilities, including, but not limited to:

Leased lines, consisting of:

- a. Ethernet access circuits, xWDM access circuits (and other high bandwidth interface) WHQA of any bandwidth located in Zone B; and
- b. Interconnection Services, Co-location, Co-location Resource Sharing, Co-Location Rack Interconnection, Shared Services within of between Co-Location Racks and Associated Facilities and services; and
- c. Interconnection Sharing.

14.3 Without prejudice to the generality of Section 14.1 of this Decision Instrument and pursuant to Regulation 12 of the Access Regulations, following a request from an Access Seeker(s) (including Eircom itself) for a new product, service or facility or a non-pricing amendment to an existing product, service or facility, Eircom shall meet the following timelines, taking due account of its other obligations including its non-discrimination obligations:

- (i) within three (3) working days of receipt of request, confirm in writing that the request has been received;
- (ii) within fifteen (15) working days of receipt of request, confirm to the Access Seeker whether or not the request is for a new or amended product, service or facility and whether or not the request falls within the scope of Eircom's obligations. Where an Access request is refused (or refused in part) then Eircom shall comply with Section 17.22 of the Decision Instrument in this regard and provide a unique reference to identify the request;
- (iii) within thirty (30) working days of receipt of request, confirm whether the requesting Access Seeker has provided Eircom with sufficient information to process the request (unless otherwise agreed between Eircom and the Access Seeker), including the Access Seeker's view on the priority of the request relative to other requests pertaining to the Zone B MI WHQA Market that have already been submitted by that Access Seeker. During this thirty (30) day period Eircom may seek any clarifications that it may reasonably require from the Access Seeker regarding the request. Eircom or the Access Seeker may, for any particular request, seek agreement from ComReg that the thirty (30) working day period be extended;

- (iv) within eighty five (85) working days, unless otherwise agreed with ComReg, confirm in writing to the Access Seeker whether it agrees to provide the requested new or amended product, service or facility. Where the request is refused (or refused in part), Eircom shall comply with its obligations to give written reasons for its decision at the time of refusal. In the case of any divergence between Eircom's product proposal and what was originally requested, the relevant details such as each of the objective reasons for any such divergence shall be documented and provided by Eircom to the relevant Access Seeker(s) within eighty five (85) working days in a fair and reasonable manner. Should further analysis, by Eircom, during the RAP Product Development Process, give rise to new issues or concerns that bring into question the reasonableness of the Access request, then Eircom should fully explain (i.e. objectively justify) to the relevant Access Seeker(s) why a particular development, which it previously considered was reasonable and that it had previously agreed to develop, requires amendment or cannot progress to completion.
- 14.4 Without prejudice to the generality of Sections 14.1 and 14.2 of this Decision Instrument, Eircom shall offer and continue to offer and provide Access to the products, services and facilities referred to in Section 14 of this Decision Instrument in accordance with the product descriptions and terms and conditions of supply or use, as specified in the current version of the LLRO (i.e. LLRO version N, dated 21 June 2017 as published on Eircom's wholesale website) as may be amended from time to time, and, in addition, in accordance with Eircom's obligations under this Decision Instrument.
- 14.5 Without prejudice to the general obligations set out in Sections 14.1 to 14.3, of this Decision Instrument, Eircom shall:
- (i) pursuant to Regulation 12(2)(b) of the Access Regulations, negotiate in good faith with Undertakings requesting Access;
 - (ii) pursuant to Regulation 12(2)(c) of the Access Regulations, not withdraw Access to facilities already granted without the prior approval of ComReg and in accordance with terms and conditions as may be determined by ComReg;
 - (iii) pursuant to Regulation 12(2)(e) of the Access Regulations, grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities;
 - (iv) pursuant to Regulation 12(2)(h) of the Access Regulations, provide Access to OSS or similar software systems necessary to ensure fair competition in the provision of services (including those products, services and facilities described in this Section 14).

15. CONDITIONS ATTACHED TO THE ACCESS OBLIGATION

- 15.1 Pursuant to Regulation 12(3) of the Access Regulations, Eircom shall, in relation to the obligations set out in Section 14 above, grant Undertakings Access in a fair, reasonable and timely manner.
- 15.2 Without prejudice to the generality of Section 15.1 above, pursuant to Regulation 12(3) of the Access Regulations, Eircom shall:
- (i) conclude, maintain and update legally binding, fit for purpose SLAs with Access Seekers for WHQA products, services and facilities, which shall encourage an efficient level of performance;
 - (ii) negotiate in good faith with Access Seekers in relation to the conclusion of legally binding and fit-for-purpose SLAs (either in the case of a new SLA or an amendment to an existing SLA);
 - (iii) provide Access Seekers, at the end of the SLA Negotiation Period, with Eircom's best and final offer ('**BAFO**') in respect of the relevant SLA which, for the avoidance of doubt, shall be fit for purpose; include all relevant information that is required under this Section 15.2 and accord with the principles set out in this Section 15.2. The SLA Negotiation Period ends with the closing of negotiations and the making of a BAFO by Eircom to Access Seekers with respect to the SLA. When Eircom makes its BAFO, the SLA Negotiation Period is deemed by ComReg to be concluded;
 - (iv) ensure that the SLA Negotiation Period includes a discussion on the process for suspension of an SLA and the associated terms and conditions, as described below;
 - (v) ensure that SLAs specify the circumstances that trigger the payment of Service Credits, such as, but not limited to, a failure by Eircom to achieve committed service levels, or the occurrence of certain specified events (such as, but not limited to, incidents of service outage or deterioration), and/or other such criteria as appropriate;
 - (vi) ensure that SLAs specify the methodology to be used for calculating the quantum of any Service Credits to be paid and include an example calculation of Service Credits;
 - (vii) ensure that circumstances which trigger the payment of Service Credits and the methodology for calculating the quantum of Service Credits, taken together, are fair and reasonable in that they adequately incentivise Eircom to deliver an efficient level of service quality and allow Access Seekers to recoup at a minimum the direct costs and any other loss of value that the Access Seekers incur as a result of the circumstances that triggered the payment of Service Credits;

- (viii) ensure that the application of Service Credits, where they occur, shall be applied automatically and in a timely and efficient manner;
- (ix) ensure that SLAs include, where appropriate, the comprehensive set of terms and conditions governing the circumstances when the SLA can be suspended, and the process to be applied for the suspension of the SLA. Such terms and conditions should be based on objectively defined and measurable parameters;
- (x) in relation to an existing product, service or facility, following a request from an Access Seeker (including Eircom) for an amendment to an SLA, Eircom shall, within one (1) month of the receipt of such a request, inform the Access Seeker in writing whether the request for an amendment is accepted or rejected and, if accepted, include details of the SLA Negotiation Period and the associated start date. Negotiations in respect of the amended SLA shall close, unless otherwise agreed with ComReg, within six (6) months of the date the Access Seeker makes such a request. Within one (1) month of the date the Access Seeker makes such a request, Eircom may seek an extension to the six (6) month period from ComReg;
- (xi) in relation to an amendment to an existing product, service or facility, where Eircom itself initiates the amendment, Eircom shall, within one (1) month of the initiated amendment, inform and seek Access Seekers' views as to whether the proposed product amendment should result in an amendment to the relevant SLA;
- (xii) ensure that its obligations with respect to SLAs have been complied with prior to notifying ComReg of non-pricing amendments or changes to the Leased Line Reference Offer ('LLRO') resulting from the offer of a new or an amendment to an existing product, service or facility that falls within the scope of the Relevant Market;
- (xiii) ensure that the new or amended SLA is implemented and is made available to Access Seekers by the date on which:
 - a. any amendment or change to an existing product, service or facility;
 - or
 - b. the offer of a new product, service or facilitycomes into effect.
- (xiv) where the amended SLA does not relate to (xiii)a or (ii) above, Eircom shall ensure that the amended SLA is implemented and is made available to Access Seekers within three (3) months from the end of the SLA Negotiation Period (unless otherwise agreed with ComReg);

- (xv) within six (6) months (unless otherwise agreed with ComReg) of the Effective Date of this Decision Instrument, Eircom shall update its SLAs to include all relevant information and accord with the principles set out above.

15.3 The access obligations set out in this Section 15 shall apply irrespective of the electronic communications service that the requested access product, service or facility shall be used to provide. For the avoidance of doubt, the purpose for which the access request is made is not limited to the provision of services to End Users.

16. OBLIGATION OF NON-DISCRIMINATION

16.1 Pursuant to Regulation 10 of the Access Regulations, Eircom shall have an obligation of non-discrimination in respect of the provision of Access, including Access as regards those services, products and facilities described in Sections 14 and/or 15 of this Decision Instrument. Without prejudice to the generality of the foregoing, Eircom shall:

- (i) apply equivalent conditions in equivalent circumstances to other Undertakings requesting, or being provided with Access (including Access to those products, services and facilities described in Sections 14 and/or 15 of this Decision Instrument) or requesting or being provided with information in relation to such Access; and
- (ii) provide Access (including Access to those products, services and facilities described in Sections 14 and/or 15 of this Decision Instrument) and information in relation to such Access to all other Undertakings under the same conditions and of the same quality as Eircom provides to itself or to its subsidiaries, affiliates or partners.

16.2 Without prejudice to the generality of Section 16.1 above, Eircom shall (unless otherwise specified in this Decision Instrument) provide Access, including Associated Facilities, to those products, services and facilities required in accordance with Sections 14 and/or 15 of this Decision Instrument on, at least, an Equivalence of Outputs basis.

16.3 Without prejudice to the generality of Section 16.1, the obligations contained therein shall apply irrespective of whether or not a specific request for services or information has been made to Eircom by an Undertaking.

17. OBLIGATION OF TRANSPARENCY

- 17.1 Pursuant to Regulation 9 of the Access Regulations, Eircom shall be subject to an obligation of transparency in relation to Access (including Access to those products, services and facilities described in Sections 14 and/or 15 of this Decision Instrument).
- 17.2 Without prejudice to the generality of Section 17.1 of this Decision Instrument, pursuant to Regulation 9(2) of the Access Regulations, Eircom shall make publicly available and keep updated on its website, a LLRO and an associated Price List.
- 17.3 The LLRO shall be sufficiently unbundled so as to ensure that Undertakings availing of Access (including Access to those products, services and facilities described in Sections 14 and/or 15 of this Decision Instrument) are not required to pay for products, services or facilities which are not necessary for the Access requested.
- 17.4 Without prejudice to the generality of Section 17.3 of this Decision Instrument, and in accordance with the obligations specified elsewhere in this Decision Instrument, Eircom shall ensure that its LLRO includes at least the following:
- (i) a description of the offer of contract for Access (including Access to those products, services and facilities described in Sections 14 and/or 15 of this Decision Instrument) broken down into components according to market needs;
 - (ii) a description of any associated contractual or other terms and conditions for supply of Access (including Access to those products, services and facilities described in Sections 14 and/or 15 of this Decision Instrument) and use, including prices;
 - (iii) a description of the technical specifications and network characteristics of the Access (including Access to those products, services and facilities described in Sections 14 and/or 15 of this Decision Instrument) being offered; and
 - (iv) the terms, conditions, Service Level Agreements, guarantees and other product related assurances associated with MI WHQA products, services and facilities.
- 17.5 In the event of any conflict between the LLRO and associated documentation such as the LLRO Price List (including where represented as updated for the purposes of this Decision Instrument), and Eircom's obligations as set out under this Decision Instrument, it is the latter which shall prevail.

- 17.6 Without prejudice to the generality of Sections 17.1 and 17.2 above and pursuant to Regulation 9 of the Access Regulations Eircom shall:
- (i) continue to publish and keep updated on its publicly available website, its LLRO in the same form and format as version N, dated 21 June 2017, as may be amended from time to time, insofar as those products, services or facilities contained therein relate to the obligations set out in this Decision Instrument;
 - (ii) publish and keep updated on its publicly available website both clean (or unmarked) and tracked changed (or marked) versions of its LLRO (insofar as it relates to the products, services and facilities to be provided in accordance with the requirements of this Decision Instrument). The tracked change version of the LLRO shall be sufficiently clear to allow Undertakings to clearly identify all actual and proposed amendments from the preceding version of its LLRO;
 - (iii) publish and keep updated on its publicly available website an accompanying LLRO Change Matrix which lists all of the amendments incorporated or to be incorporated in any amended LLRO;
 - (iv) publish and keep updated on its publicly available website both clean (unmarked) and tracked changed (marked) versions of the LLRO Price List(s) (insofar as it relates to the products, services and facilities to be provided in accordance with the requirements of this Decision Instrument). The tracked change version of the LLRO Price List shall be sufficiently clear to allow Undertakings to clearly identify all actual and proposed amendments from the preceding version of its LLRO Price List;
 - (v) publish and keep updated on its publicly available website a LLRO Price List Change Matrix; and
 - (vi) maintain and make publicly available on its wholesale website a copy of historic versions of its LLRO, LLRO Price List, LLRO Change Matrix and LLRO Price List Change Matrix.
- 17.7 Eircom shall ensure that its wholesale invoices are sufficiently disaggregated, detailed and clearly presented such that an Undertaking can reconcile invoices to Eircom's LLRO and LLRO Price Lists.
- 17.8 Eircom Shall invoice Access Seekers on a monthly basis, one month in advance of the provision of the relevant service, with credit terms set at thirty (30) calendar days.

- 17.9 In respect of both pricing and non-pricing amendments or changes to the LLRO resulting from either the offer of a new product, service or facility which falls within the scope of the Relevant MI WHQA Market or a change to an existing product, service or facility which falls within the scope of the Relevant MI WHQA Market, the following obligations will apply:
- (i) Eircom shall, unless otherwise agreed by ComReg, make publicly available and publish on Eircom's publicly available wholesale website at least three (3) months in advance of their coming into effect, any proposed amendments or changes to the LLRO or the LLRO Price List(s).
 - (ii) Eircom shall notify ComReg in writing with the information to be published at least five (5) working days in advance of any such publication taking place, that is, three (3) months and five (5) working days prior to any amendments or changes coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion.
- 17.10 Eircom shall, as specified by ComReg in writing from time to time, make publicly available on its wholesale website, information such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices, in respect of the products, services and facilities referred to in Sections 14 and/or 15 above.
- 17.11 Pursuant to Regulation 9(3) of the Access Regulations, ComReg may issue directions requiring Eircom to make changes or amendments to its SLAs, the LLRO (and its associated documents), LLRO Price List, LLRO Change Matrix or LLRO Price List Change Matrix to give effect to obligations imposed by this Decision Instrument and to publish such documents with such changes. In accordance with Regulation 18 of the Access Regulations, ComReg may issue directions to Eircom from time to time requiring it to publish information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use and prices.
- 17.12 Eircom shall publish KPIs on its publicly available wholesale website. The specification of the content of the KPIs shall be in accordance with the obligations set out in ComReg Decision D05/11 (as may be amended from time to time). Pursuant to Regulations 8, 9 and 18 of the Access Regulations, the sections of Annex 4 of the Decision Instrument contained in ComReg Decision D05/11 titled "Metrics associated with Supply of Services", "Metrics associated with Designation of Service Orders" and "Metrics associated with Repair of Services" are withdrawn and replaced with the following:

"Metrics associated with Services in the MI WHQA market

All figures shall be calculated by Eircom for each Data Collection Period.

The figures for each Data Collection Period shall be calculated as described below. They will apply as relevant to each individual metric as laid out in the associated tabature form.

Title	Definition
Average delivery supply times for Zone B MI WHQA Access Lines for wholesale customers	Average supply-time in working days for delivery of Zone B MI WHQA Access Lines for wholesale orders only (those to OAOs) in categories for standard, project and non-standard designated orders for all orders (100%), and for 97.5% of orders (2.5% of orders with the longest supply time discarded), measured monthly, delivered in a specified 3 month quarterly time-period
Average delivery supply times for Zone B MI HQA Lines for retail customers	Average supply-time in working days for delivery of Zone B MI HQA Lines for retail orders only in categories for standard, project and non-standard designated orders for all orders (100%), and for 97.5% of orders (2.5% of orders with the longest supply time discarded), measured monthly, delivered in a specified 3 month quarterly time-period

Table 5 Definitions: Supply of Zone B MI WHQA/HQA Services

Title	Definition
Order designation statistics for Zone B MI WHQA Access Lines for wholesale customers	Percentage of orders for Zone B MI WHQA Access Lines which are categorised as being standard, project and non-standard for wholesale orders only, as defined in the corresponding Eircom SLA's, measured monthly, of those order placed within a specified 3 monthly time period
Order designation statistics for Zone B MI HQA Lines for retail customers	Percentage of orders for Zone B MI HQA Lines for retail orders only which are categorised as being standard, project and non-standard, as defined in the corresponding Eircom SLA's, measured monthly, of those order placed within a specified 3 monthly time period

Table 6 Definitions: Order Designation of Zone B MI WHQA/HQA Services

Title	Definition
Percentages of fault on Zone B MI WHQA Access services repaired within 8, 24 and after 24 hours (excludes non-faults and co-op faults)	Percentage of faults (excludes non-faults and co-op faults) reported on Zone B MI WHQA Access services repaired within 8, 24 and after 24 hours, of all faults reported, measured on a quarterly basis

Table 7 Definitions: Repair of Zone B MI WHQA/HQA Access Services

Title	Definition
Average delivery supply times for Zone A MI WHQA Interconnection Lines for wholesale customers	Average supply-time in working days for delivery of Zone A MI WHQA Interconnection Lines for wholesale orders only (those to OAOs) in categories for standard, project and non-standard designated orders for all orders (100%), and for 97.5% of orders (2.5% of orders with the longest supply time discarded), measured monthly, delivered in a specified 3 month quarterly time-period
Average delivery supply times for Zone A MI HQA Lines for retail customers (Note: A MI HQA Line for retail customers is classified as both Access and Interconnection)	Average supply-time in working days for delivery of Zone A MI HQA Lines for retail orders only in categories for standard, project and non-standard designated orders for all orders (100%), and for 97.5% of orders (2.5% of orders with the longest supply time discarded), measured monthly, delivered in a specified 3 month quarterly time-period
Average delivery supply times for Zone B MI WHQA Interconnection Lines for wholesale customers	Average supply-time in working days for delivery of Zone B MI WHQA Interconnection Lines for wholesale orders only (those to OAOs) in categories for standard, project and non-standard designated orders for all orders (100%), and for 97.5% of orders (2.5% of orders with the longest supply time discarded), measured monthly, delivered in a specified 3 month quarterly time-period
Average delivery supply times for Zone B MI HQA Lines for retail customers (Note: A MI HQA Line for retail customers is classified as both Access and Interconnection)	Average supply-time in working days for delivery of Zone B MI HQA Lines for retail orders only in categories for standard, project and non-standard designated orders for all orders (100%), and for 97.5% of orders (2.5% of orders with the longest supply time discarded), measured monthly, delivered in a specified 3 month quarterly time-period

Table 8 Definitions: Supply of MI WHQA/HQA Interconnection Services

Title	Definition
Order designation statistics for Zone A MI WHQA Interconnection Lines for wholesale customers	Percentage of orders for Zone A MI WHQA Interconnection Lines which are categorised as being standard, project and non-standard for wholesale orders only, as defined in the corresponding Eircom SLA's, measured monthly, of those order placed within a specified 3 monthly time period
Order designation statistics for Zone A MI HQA Lines for retail customers (Note: A MI HQA Line for retail customers is classified as both Access and Interconnection)	Percentage of orders for Zone A MI HQA Lines for retail orders only which are categorised as being standard, project and non-standard, as defined in the corresponding Eircom SLA's, measured monthly, of those order placed within a specified 3 monthly time period
Order designation statistics for Zone B MI WHQA Interconnection Lines for wholesale customers	Percentage of orders for Zone B MI WHQA Interconnection Lines which are categorised as being standard, project and non-standard for wholesale orders only, as defined in the corresponding Eircom SLA's, measured monthly, of those order placed within a specified 3 monthly time period
Order designation statistics for Zone B MI HQA Lines for retail customers (Note: A MI HQA Line for retail customers is classified as both Access and Interconnection)	Percentage of orders for Zone B MI HQA Lines for retail orders only which are categorised as being standard, project and non-standard as defined in the corresponding Eircom SLA's, measured monthly, of those order placed within a specified 3 monthly time period

Table 9 Definitions: Order Designation of MI WHQA/HQA Interconnection Services

Title	Definition
Percentages of wholesale faults on MI WHQA Interconnection services repaired within 8, 24 and after 24 clock hours (excludes non-faults and co-op faults)	Percentage of wholesale faults (excludes non-faults and co-op faults) reported on MI WHQA Interconnection services repaired within 8, 24 and after 24 clock hours, of all faults reported, measured on a quarterly basis
Percentages of fault on retail MI HQA Lines Interconnection services only (with 24*7 SLA) repaired within 8, 24 and after 24 clock hours (excludes non-faults and co-op faults)	Percentage of faults (excludes non-faults and co-op faults) reported on retail MI HQA Lines Interconnection services only (with 24*7 SLA) repaired within 8, 24 and after 24 clock hours, of all faults reported, measured on a quarterly basis

Table 9a Definitions: Repair of MI WHQA/HQA Interconnection Services

17.13 Pursuant to Regulations 8, 9 and 18 of the Access Regulations, Tables 5, 6, 7, 8 and 9 of Appendix 2 of the Decision Instrument contained in ComReg Decision D05/11 are withdrawn and replaced with the following:

	Retail				Wholesale			
Metrics associated with Supply of Services	STD	Proj.	NSTD	Total	STD	Proj.	NSTD	Total
– Zone B MI WHQA Access Services								
100% of Orders								
Average Supply Time	WDs	WDs	WDs	WDs	WDs	WDs	WDs	WDs
95% of Orders								
Average Supply Time	WDs	WDs	WDs	WDs	WDs	WDs	WDs	WDs

Table 5: Supply of Zone B MI WHQA Access Services KPIs

	Retail			Wholesale		
Metrics associated with Order Designation	<i>STD</i>	<i>Proj.</i>	<i>NSTD</i>	<i>STD</i>	<i>Proj.</i>	<i>NSTD</i>
<i>Zone B MI WHQA Access Services</i>	%	%	%	%	%	%

Table 6: Order Designation of Zone B MI WHQA Access Services KPIs

	Retail			Wholesale		
Metrics associated with Fault Repair	<8 WHs	<24 WHs	>24WHs	<8 WHs	<24 WHs	>24WHs
Zone B MI WHQA Access Services	%	%	%	%	%	%

Table 7: Repair of Zone B MI WHQA Access Services

	Retail				Wholesale			
Metrics associated with Supply of Interconnection Services	<i>STD</i>	<i>Proj.</i>	<i>NSTD</i>	<i>Total</i>	<i>STD</i>	<i>Proj</i>	<i>NSTD</i>	<i>Total</i>
<i>Zone A MI WHQA Interconnection Services</i>								
<i>100% of Orders Average Supply Time</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>
<i>Zone A MI WHQA Interconnection Services</i>								
<i>95% of Orders Average Supply Time</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>
<i>Zone B MI WHQA Interconnection Services</i>								
<i>100% of Orders Average Supply Time</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>
<i>Zone B MI WHQA Interconnection Services</i>								
<i>95% of Orders Average Supply Time</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>	<i>WDs</i>

Table 8: Supply of MI WHQA Interconnection Services KPIs

	Retail			Wholesale		
<i>Metrics associated with Order Designation</i>	<i>STD</i>	<i>Proj.</i>	<i>NSTD</i>	<i>STD</i>	<i>Proj.</i>	<i>NSTD</i>
<i>Zone A MI WHQA Interconnection Services</i>	%	%	%	%	%	%
<i>Zone B MI WHQA Interconnection Services</i>	%	%	%	%	%	%

Table 9: Order Designation of MI WHQA Interconnection Services KPIs

	Retail			Wholesale		
<i>Metrics associated with Fault Repair</i>	<i><8 Clock Hours</i>	<i><24 Clock Hours</i>	<i>>24 Clock Hours</i>	<i><8 Clock Hours</i>	<i><24 Clock Hours</i>	<i>>24 Clock Hours</i>
<i>Zone A MI WHQA Interconnection Services</i>	%	%	%	%	%	%
<i>Zone B MI WHQA Interconnection Services</i>	%	%	%	%	%	%

* retail MI HQA Lines with 24*7 SLA only

Table 9a: Repair of MI WHQA Interconnection Services

- 17.14 Eircom shall on a quarterly basis, publish on its publicly available wholesale website, a report that evidences actual performance achieved in respect of all Undertakings on an aggregate basis compared to the committed service levels contained in the relevant SLA for the products, services and facilities referred to in Sections 14 and/or 15 of this Decision Instrument. Eircom shall also include in the report the methodology and a description of the source data used to determine the actual performance achieved. The report shall also describe how the source data was processed by Eircom and include worked examples as to how the processed source data relates to the actual performance achieved.
- 17.15 Eircom shall make publicly available on its wholesale website all SLAs (and any updates thereto) relating to the provision of the products, services and facilities that are to be provided in accordance with Sections 14 and/or 15 of this Decision Instrument.

- 17.16 Where Eircom considers certain aspects of information to be provided under the obligations set out in this Section 17 to be of a confidential and/or commercially sensitive nature, Eircom shall, without delay, provide ComReg with complete details of such information along with objective reasons justifying why it considers that information is confidential and/or commercially sensitive. ComReg will consider the information in accordance with ComReg Document No. 05/24. If ComReg considers that the information is not confidential and/or commercially sensitive, it shall be published by Eircom in accordance with its obligations under this Section.
- 17.17 If ComReg concludes that the information is confidential and/or commercially sensitive, Eircom shall publish general details as to the nature of such information and shall make it available to an OAO that has signed a Non-Disclosure Agreement (“NDA”), the terms and conditions of which shall be fair, reasonable and non-discriminatory. The NDA shall also be published on Eircom’s publicly available website. Any confidential and/or commercially sensitive information referred to in Section 17.16 above shall not be made available by Eircom to its downstream operations until such time as it is made available to an OAO, or as otherwise agreed with ComReg.
- 17.18 If and when the commercially sensitive and/or confidential information referred to in Sections 17.16 and 17.17 above ceases to be commercially sensitive and/or confidential, it shall be made available by Eircom on its publicly available wholesale website without undue delay and without the need for an NDA to be signed.
- 17.19 For the avoidance of doubt, the obligations set out in this Section 17 apply irrespective of whether or not a specific request for products, services, facilities or information has been made by an Undertaking to Eircom.
- 17.20 Eircom shall publish and keep updated on its publicly available website a description of its product development process, including a description of all process steps and activities, identifying all key milestones and decision points, starting from the receipt of a request from an Access Seeker, through to the launch of a new or changed wholesale product, service or facility.
- 17.21 For each proposed development, Eircom shall, at the earliest possible time, but in any event not later than fifteen (15) working days after the receipt of an access request for the development of a product, service or facility in a regulated market, provide and keep updated on its publicly available website a Product Development Roadmap listing all of the accepted access requests with the following details for each proposed development:
- (i) a unique identifier for each access request;

- (ii) a description of each access request including a copy of, or links to, all documents relevant to each request;
- (iii) the milestones and associated target dates to develop and launch each proposed product, process or service. Eircom shall inform Access Seekers of any changes to such target dates at the earliest point in time after the need for such changes are identified by Eircom;
- (iv) a method for tracking the progress of developments against those dates;
- (v) Eircom must identify the proposed date by which Access Seekers can notify Eircom of the degree of priority to be given to each particular development, and communicate that date to Access Seekers.

17.22 Eircom shall publish the following information:

- (i) for each access request received by Eircom and accepted by Eircom as being in a regulated market Eircom shall, at the earliest possible time, but not later than fifteen (15) working days after the receipt of the access request, advise all Access Seekers that the request has been received and provide them with information regarding the request;
- (ii) the information provided to Access Seekers should include a unique reference number that will allow tracking of the request, and all known details relevant to the request, including, but not limited to, a copy of the request where a written request has been made and, in all cases, a description of the key features and functionality requested;
- (iii) not later than thirty (30) working days, unless otherwise agreed with ComReg, after receipt of the access request, Eircom shall agree with the Access Seeker an accurate description of the requirement(s) and shall publish a description of the requested product or service on its publicly available website;

- (iv) within eighty five (85) working days, unless otherwise agreed with ComReg, Eircom shall confirm in writing to Access Seekers whether it agrees to provide the requested new or amended product, service or facility. Where the request is refused, Eircom shall comply with its obligations to give written reasons for its decision at the time of refusal. In addition, Eircom shall advise all other Access Seekers when the request has been refused and give written reasons for its decision to refuse to meet the request, at the time of refusal, to all other Access Seekers. If Eircom does not intend to fully meet the requirement(s) (i.e., where, for example, Eircom agrees to the development, but some elements of the requirement are not being met) Eircom should make Access Seekers aware of this within eighty five (85) working days. The relevant details, such as the objective reasons for any divergence from the original request, shall also be documented and provided by Eircom to Access Seekers within eighty five (85) working days. Eircom shall, in addition, within eighty five (85) working days, identify the degree of priority relative to all other developments, including Access requests and amendments proposed by Eircom, of regulated products, services or facilities in the Relevant Market that it proposes to assign to each proposed development;
- (v) Eircom shall, for each such development, provide Access Seekers with all other relevant documentation including, but not limited to, any revised industry process manual, price lists or technical manuals;
- (vi) at all stages of the wholesale product development process, Eircom shall make publicly available and keep updated on its website, all relevant documentation describing the product or service which will be delivered by each development in sufficient detail such that an operator could reasonably be aware of the key features and functionality proposed, the proposed geographic reach of the product or service and any relevant limitations of the product or service;
- (vii) Eircom shall provide and keep updated on its publicly available website a Product Development Roadmap listing all of the accepted access requests including the priority given by Eircom to the development of each request relative to other developments of regulated products, services or facilities within the Zone B MI WHQA Market. Eircom shall update its Product Development Roadmap with the priority given by it to a request within 85 working days of receipt of such a request;

- (viii) Eircom shall publish the prioritisation process and the criteria used by it with respect to the prioritisation of product developments in relation to each other. Eircom shall objectively justify to Access Seekers any reprioritisation of a request that may occur from the time of the initial request until its launch;
- (ix) Eircom shall provide and keep updated on its publicly available website a Product Development Roadmap that includes a method for tracking the progress of developments against the Milestones and associated target dates to develop and launch each proposed product, process or service;
- (x) Eircom shall provide any other information as may reasonably be required by ComReg for the purposes of ensuring transparency.

18. OBLIGATION OF ACCOUNTING SEPARATION

18.1 Pursuant to Regulation 11 of the Access Regulations, Eircom shall have an obligation to maintain separated accounts in respect of the products, services and facilities falling within the scope of this Decision Instrument. All of the obligations in relation to accounting separation, set out at Annexes 1 and 2 of ComReg Decision D08/10, applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument, and relating to products, services and facilities falling within the scope of this Decision Instrument shall be maintained in their entirety.

19. OBLIGATIONS RELATING TO PRICE CONTROL AND COST ACCOUNTING

- 19.1 Pursuant to Regulation 13(1) of the Access Regulations, Eircom shall maintain appropriate cost accounting systems in respect of products, services and facilities described in Sections 14 and/or 15 of this Decision Instrument.
- 19.2 Pursuant to Regulation 13(1) of the Access Regulations, the prices offered or charged by Eircom to any Undertaking for Access to, or use of, the products, services or facilities described in Sections 14 and/or 15 of this Decision Instrument shall be cost orientated.
- 19.3 Pursuant to and in accordance with Regulation 13 of the Access Regulations, the prices offered or charged by Eircom to any Undertaking for any product, service or facilities described in Sections 14 and/or 15 of this Decision Instrument shall be calculated using, a BU LRAIC+ cost methodology.

19.4 Pursuant to, and in accordance with, Regulation 13 of the Access Regulations, the prices offered or charged by Eircom to any Undertaking for any product, service or facilities described in Sections 14 and/or 15 of this Decision Instrument shall be calculated in accordance with paragraph 19.3 using the following cost models, as appropriate:

- a. The Revised Copper Access Model detailed in Chapter 5 of ComReg Decision D03/16;
- b. the NGN Core Network model detailed in Chapter 4 of ComReg Decision D02/12 and any further developments of the NGN Core Model contained in Chapter 8 of ComReg Document No. 17/26, as may be updated from time to time.

19.5 Without prejudice to the generality of Section 19.3, pursuant to Regulation 13 of the Access Regulations, Eircom shall ensure that it recovers no more than its actual incurred costs adjusted for efficiencies (plus a reasonable rate of return) in respect of connection fees for any product, service and/or facility described in Sections 14 and/or 15 of this Decision Instrument.

20. OBLIGATIONS RELATING TO STATEMENTS OF COMPLIANCE

20.1 Pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations Eircom shall submit to ComReg a written Statement of Compliance that adequately demonstrates its compliance with its regulatory obligations in the Zone B MI WHQA Market. This Statement of Compliance shall include the following:

- (i) a full and true written statement, signed by a Director or Directors (henceforth, “the Directors”) authorised to provide such statement(s) on behalf of the Board of Directors of Eircom Limited⁸⁰³, to be provided annually within 6 months of Eircom’s financial period end⁸⁰⁴ in which:
 - a. the Directors acknowledge that they are responsible for Eircom securing compliance with its regulatory obligations;

⁸⁰³ Which, for the avoidance of doubt, shall include any successors and/or assigns of Eircom Limited.

⁸⁰⁴ For the avoidance of doubt, where the financial period is shorter or longer than one year, within 6 months of the end of that financial period.

- b. the Directors confirm that, in their opinion, arrangements, structures and internal controls are in place that provide reasonable assurance that Eircom is compliant with its regulatory obligations;
- c. the Directors explain the basis upon which the confirmation in Section 20.1(i)(b) above is made, including the information relied upon and the processes followed, in order to support the assertions made in this Statement of Compliance and to ensure that its contents are materially accurate in all respects;
- d. in the event that the Directors cannot provide the confirmation required in Section 20.1(i)(b) above, the Directors shall provide the reasons for this in writing to ComReg. Such explanation should explain, amongst other things, whether:
 - i. the arrangements structures and internal controls, referred to in Section 20.1(i)(b), are not in place, and if so, why,
 - and/or
 - ii. in the Directors' opinion, the arrangements structures and internal controls, referred to in Section 20.1(i)(b), do not provide reasonable assurance that Eircom is compliant with its regulatory obligations;
- e. the Directors confirm that, in their opinion, they have conducted an appropriate review process in the period since the last Statement of Compliance provided, pursuant to this Section, to ensure the ongoing effectiveness of the arrangements, structures and internal controls referred to in Section 20.1(i)(b) above. This confirmation shall be accompanied by a description of the review process;
- f. the Directors confirm that adequate documentation is in place that, in their opinion, would be sufficient to provide evidence as to the operation and adequacy of the arrangements, structures and internal controls on which reliance is placed to ensure Eircom's regulatory compliance including, but not limited to:
 - i. risk identification as it relates to non-compliance with regulatory obligations;
 - ii. the design of measures and arrangements and internal controls to mitigate such risk;
 - iii. the operation of such controls;

- iv. a review of the adequacy of measures arrangements and internal controls.
- (ii) a description of the process of risk identification, and the controls developed to mitigate risks of non-compliance with Eircom's regulatory obligations, as they relate to the categories of activities in Section 20.2 below and shall include the following in particular:
 - a. a detailed description of the risk analysis process, to include the following:
 - i. a detailed description of the expertise employed by Eircom;
 - ii. a list of all material including all relevant documentation;
 - iii. a description of how the material and expertise was used;
 - iv. a description of the purpose of each process which was analysed for risks of non-compliance.
 - b. a detailed description of the risks identified utilising the risk analysis process described in Section 20.1(ii)(a) above;
 - c. a detailed description of the controls developed utilising the control development process described in Section 20.1(ii)(d) below;
 - d. a detailed description of the control development process to include the following:
 - i. a description of the relationship of each control to the underlying risk identified pursuant to Section 20.1(ii)(b) above;
 - ii. a description of the expertise relied upon by Eircom;
 - iii. a list of all material including all relevant documentation used;
 - iv. a description of how the material and expertise was used;
 - v. a description of the process used to assess the effectiveness of the controls.
 - e. a description of the operation of controls including the method employed by Eircom to record and store the data produced when controls are operated;

- f. a description of and the identification of the repository in which the data from the operation of each control is recorded and stored.

20.2 The obligations set out in Section 20.1 above shall apply, but are not limited, to the following categories of activities:

- (i) pre-provisioning, provisioning and service assurance for MI WHQA products, services and facilities;
- (ii) product development including product enhancements, and pre product development screening of Access requests;
- (iii) product prioritisation and investment decisions;
- (iv) access to shared resources, including IT and product development resources;
- (v) the management of information, both Structured Information and Unstructured Information in conformance with regulatory requirements;
- (vi) the preparation and submission of bids in response to a commercial or government request for a proposal or tender;
- (vii) other categories as may reasonably be required by ComReg.

20.3 The documentation referred to in Section 20.1 above shall be of sufficient clarity and detail to enable ComReg, or a third party, as determined by ComReg, to review any relevant Statement of Compliance for completeness and accuracy. Such documentation and information shall also enable ComReg, or a third party, as determined by ComReg, to assess whether Eircom has taken all reasonable steps to ensure that the risk assessment and control and governance measures referred to in Section 20.1 above provide reasonable assurance to ComReg that Eircom is compliant with the obligations set out in this Decision Instrument.

20.4 Eircom shall ensure that any Statement(s) of Compliance provided pursuant to this Section 20 will be kept updated as required to reflect material changes to the documentation and information detailed in Section 20.1 above. These updates will be provided to ComReg within one (1) month of the update being made by Eircom.

20.5 Updates or changes to any Statement(s) of Compliance provided to ComReg will be presented such that the changes are highlighted and the Statement of Compliance documents include a Version Control and Revision History.

- 20.6 Eircom shall publish any Statement of Compliance, and updates to any Statement(s) of Compliance, on its publically available website within one (1) month of providing it to ComReg, unless otherwise agreed with ComReg.
- 20.7 Other than a set out in Section 20.1(i) above, which shall be provided annually, Eircom shall provide to ComReg a Statement of Compliance, as referred to in this Section 20, within six (6) months of the Effective Date of this Decision or:
- (i) in the case of any offer of a new MI WHQA product, service or facility, seven (7) months in advance of its being made available;
 - (ii) in the case of any change to an existing MI WHQA product, service or facility, three (3) months in advance of it being made available;
 - (iii) as may otherwise be required by ComReg.

PART IV – MAINTENANCE OF OBLIGATIONS, WITHDRAWAL OF OBLIGATIONS, OPERATION AND EFFECTIVE DATE (SECTIONS 21 TO 26 OF THE DECISION INSTRUMENT)

21. STATUTORY POWERS NOT AFFECTED

- 21.1 Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the Effective Date of this Decision Instrument).

22. “SUNSET” PROVISION IN RESPECT OF THE HIGH BANDWIDTH TI WHQA MARKET

- 22.1 In respect of the High Bandwidth TI WHQA Market, the obligation imposed by the first sentence of Section 6.2(iii) of the Decision Instrument contained in Appendix A to ComReg Decision D06/08 shall continue in force for six (6) months from the Effective Date.
- 22.2 Pursuant to Regulations 8 and 12 of the Access Regulations and Section 6.2(ii) of the Decision Instrument contained in Appendix A to ComReg Decision D06/08, Eircom shall not withdraw access to any products, services or facilities in the High Bandwidth TI WHQA Market to which access was previously granted pursuant to or consistent with an obligation imposed by ComReg Decision D06/08 (as amended), or in respect of which access has been sought prior to the Effective Date of this Decision. This obligation to be withdrawn with effect from six (6) months from the Effective Date.

- 22.3 Access to any products, services or facilities in the High Bandwidth TI WHQA market provided by Eircom to any Undertaking pursuant to the obligations contained in Sections 22.1 and/or 22.2 above, shall be provided at prices no higher than those prevailing for such products, services or facilities on the Effective Date.

23. “SUNSET” PROVISION IN RESPECT OF THE ZONE A MI WHQA MARKET

- 23.1 In respect of the Zone A MI WHQA Market, the obligation imposed by the first sentence of Section 6.2(iii) of the Decision Instrument contained in Appendix A to ComReg Decision D06/08 shall continue in force for twelve (12) months from the Effective Date.
- 23.2 Pursuant to Regulations 8 and 12 of the Access Regulations and Section 6.2(ii) of the Decision Instrument contained in Appendix A to ComReg Decision D06/08, Eircom shall not withdraw access to any products, services or facilities in the Zone A MI WHQA Market to which access was previously granted pursuant to or consistent with an obligation imposed by ComReg Decision D06/08 (as amended), or in respect of which access has been sought prior to the effective date of this Decision. This obligation to be withdrawn with effect from twelve (12) months from the Effective Date.
- 23.3 The obligation imposed by Section 6.2(i) of the Decision Instrument contained in Appendix A to ComReg Decision D06/08 shall apply to, and continue in force for three (3) months from the Effective Date of this Decision Instrument in respect of, the Zone A MI WHQA Market.
- 23.4 Access to any products, services or facilities in the Zone A MI WHQA market provided by Eircom to any Undertaking pursuant to the obligations contained in Sections 23.1 and/or 23.2 and/or 23.3 above, shall be provided at prices no higher than those prevailing for such products, services or facilities on the Effective Date.

24. MAINTENANCE OF OBLIGATIONS

- 24.1 Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg, applying to Eircom, and in force immediately prior to the Effective Date of this Decision Instrument, continue in force and Eircom shall comply with the same.
- 24.2 For the avoidance of doubt, ComReg Decision D03/09 shall remain in full force and effect until further notice by ComReg.

- 24.3 For the avoidance of doubt, to the extent that there is any conflict between a Decision Instrument dated prior to the Effective Date and Eircom's obligations set out herein, it is the latter which shall prevail.
- 24.4 If any Section(s), clause(s), or provision(s), or portion(s) thereof, contained in this Decision Instrument is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s), or provision(s), or portion(s) thereof shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s), or provision(s), or portion(s) thereof, of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

25. WITHDRAWAL OF SMP OBLIGATIONS

- 25.1 Pursuant to Regulations 8, 9, 10, 11, 12 and 13 of the Access Regulations, the following Decision Instruments, and/or ComReg Documents and/or Decisions are hereby withdrawn at the Effective Date:
- (i) The Decision Instrument contained in Appendix A of ComReg Document No. 08/103, ComReg Decision D06/08, save as provided for in Sections 22 and 23 of this Decision Instrument;
 - (ii) The Decision Instrument contained in Appendix A of ComReg Document No. 10/12, ComReg Decision D02/10;
 - (iii) The Decision Instrument contained in Chapter 5 of ComReg Document No. 11/22, ComReg Decision D02/11;
 - (iv) The Decision Instrument contained in Chapter 8 of ComReg Document No. 12/03, ComReg Decision D02/12805; and
 - (v) The Decision Instrument contained in Chapter 4 of ComReg Document No. 13/75, ComReg Decision D12/13.

26. EFFECTIVE DATE

- 26.1 The Effective Date of this Decision Instrument shall be the date of its notification to Eircom and it shall remain in force until further notice by ComReg.

⁸⁰⁵ For the avoidance of doubt, Chapter 4 of ComReg Decision D02/12 shall remain in force in so far as it relates to the NGN Core Network model.

**GERRY FAHY
CHAIRPERSON
THE COMMISSION FOR COMMUNICATIONS REGULATION
THE [TO BE INSERTED] DAY OF [TO BE INSERTED] 2018**

Appendix: 5 Interviews with end-users of LLs

A 5.1 This appendix provides a summary overview of responses obtained from interview participants and is further considered in Section 3 and elsewhere throughout this Further Consultation (referred to as the '**Interviews with end-users of LLs**').

Background and objectives

A 5.2 In order to further inform its understanding of business and public sector organisations' attitudes/behaviours in the retail LL market and assess views expressed in Respondents' submissions, ComReg has conducted a number of face to face interviews with public and private sector organisations purchasing LL services. These interviews were motivated, in part, by the Respondents' submissions that stated that there was a reliance on regulated access to MI WHQA for the fulfilment of retail contracts for customers with multiple sites in different geographic locations (referred to as '**multi-site retail LL customers**').

A 5.3 These interviews examined, amongst other things:

- (a) Information on the telecommunications connectivity services currently used, for both voice and data, by interviewees (i.e. using dedicated leased lines, traditional public switched telephone networks, business broadband, using internet protocols, etc.);
- (b) Information on whether interviewees purchase these services separately and/or from different providers;
- (c) Information on interviewees' current and previous suppliers of data connectivity services;
- (d) Interviewees' current and future data connectivity needs in terms of bandwidth demand;
- (e) The characteristics of data connectivity services that interviewees place most value on;
- (f) Interviewees' experience of (if any) using P2P radio links for MI WHQA ('**wireless LLs**') and views on substitutability between wired and wireless LL services; and
- (g) Interviewees' perceptions of the retail LL market competitiveness and views on the impact of potential removal of access to regulated MI WHQA as set out in the Consultation.

A 5.4 ComReg is mindful that interviews, while a useful practical means of gathering information on consumer and business preferences/behaviours, need to be interpreted with care and that stated preferences of interview participants can differ from what how they behave in practice. Therefore, ComReg does not solely or overly rely on results of the Interviews with end-users of LLs in forming its preliminary conclusions as set out in this Further Consultation.

Research methodology and profile of interviewees

A 5.5 ComReg has conducted interviews in two stages:

- (a) Interviews with public sector organisations took place in the period September 2016 – January 2017; and
- (b) Interviews with businesses requiring data connectivity to multiple business premises/sites took place in the period February 2017 – March 2017.

A 5.6 ComReg relied on information obtained via Statutory Information Requests in order to create a list of multi-site LL customers that represented a wide range of industry sectors and connectivity needs. In compiling the list, ComReg took into consideration company size, location of company's premises, industry sector and what data connectivity services are purchased by company (e.g. technology and medium of purchased LLs).

A 5.7 Following this process, ComReg shortlisted 35 multi-site LL Customers⁸⁰⁶ as potential interviewees. On 20th of January 2017 ComReg issued a formal request to participate in ComReg's interview to 33 companies with identified person responsible for decision making in relation to purchase of telecommunications services (e.g. IT infrastructure manager) in that company⁸⁰⁷.

⁸⁰⁶ [REDACTED]

⁸⁰⁷ ComReg was unable to find relevant personnel for two companies. Thus, invitations were sent to 33 out of 35 Multi-site LL customers identified in the preliminary shortlist.

A 5.8 In total, ComReg has conducted 17 face-to-face interviews with end-users of LLs⁸⁰⁸. Table 19 presents a profile of the interviewees by site number and industrial sector.

A 5.9 13 interviewees noted that their sites are located in all four provinces of Ireland with 10 of them stating that some of these sites are located in rural areas. 7 interviewees also indicated that they request data connectivity to their international sites as part of overall data connectivity requirement. In general, ComReg considers that the sample of interviewees is broadly representative⁸⁰⁹ of multi-site end-users of LLs in Ireland. However, it should be noted that ComReg was unable to secure interviews with companies from certain industries such as grocery sector.

Table 19: Profile of interviewed end-users of LLs

Business size (in terms of sites)	1-10	11-50	51-100	>100	Total
	3 (17.6%)	7 (41.2%)	4 (23.5%)	3 (17.6%)	17
Sector					
Public administration and Government bodies	0	0	1 (33.3%)	2 (66.7%)	3 (17.6%)
Agriculture & Manufacturing	0	4 (80%)	1 (20%)	0	5 (29.4%)
Financial Services	1 (25%)	1 (25%)	1 (25%)	1 (25%)	4 (23.5%)
Utilities and Transport	1 (25%)	2 (50%)	1 (25%)	0	4 (23.5%)
Retail and other services	1 (100%)	0	0	0	1 (5.9%)
Region					
Dublin	3 (18.8%)	6 (37.5%)	4 (25%)	3 (18.8%)	16 (94.1%)
Rest of Leinster	3 (20%)	6 (40%)	3 (20%)	3 (20%)	15 (88.2%)
Munster	2 (13.3%)	7 (46.7%)	3 (20%)	3 (20%)	15 (88.2%)
Connacht/Ulster	1 (7.1%)	7 (50%)	3 (21.4%)	3 (21.4%)	14 (82.4%)

⁸⁰⁸ [3<

[3<]. One company refused to take part in the interview while the remaining 18 companies did not respond to ComReg's request.

⁸⁰⁹ It should be noted that sample base in Table 19 is not weighted to represent the profile of all businesses in Ireland.

Telecommunications services and suppliers used

- A 5.10 As detailed in Table 2, interviewees use a range of services to fulfil their data connectivity requirements. 16 interviewees noted that they use wired LLs as primary data connectivity links to connect at least some of their sites. 5 interviewees indicated that they use wireless LLs as primary service to connect at least some of their sites and 5 interviewees noted that they use business broadband services⁸¹⁰ as primary data connection at some of their sites.
- A 5.11 In general, end-user sites that use business broadband services tend to be smaller sites with lower data connectivity requirements or located in remote areas where fibre LL services are not available or too costly. 3 interviewees stated that they purchase dark fibre in order to fulfil their data connectivity requirements.
- A 5.12 14 out of 17 interviewees noted that they also purchase secondary connection for back-up/resilience purposes. These connections tend to be wireless LLs or fixed/mobile broadband services, although two interviewees noted that their sites have two wired LL links in areas where alternative fibre networks are available. In general, interviewees tend to have different suppliers for primary/secondary data connection.
- A 5.13 All interviewees indicated that they purchase MI LLs, but 12 of them also noted that they purchase TI LLs for legacy voice services.⁸¹¹ The majority of interviewed end-users of LLs (14) tend to purchase data connectivity and voice services separately.

⁸¹⁰ Such as DSL, VDSL, Cable broadband, etc.

⁸¹¹ However, most of interviewees indicated that they are considering a move to IP solutions (e.g. SIP Trunks) in the next two to three years.

Table 20: Data connectivity services used by interviewees

Type of data connectivity services used	Number of interviewees
Wired LLs as a primary service	8 (47.1%)
Both wired and wireless LLs as a primary service	4 (23.5%)
Both wired LLs and business broadband as a primary service	4 (23.5%)
Both wireless LLs and business broadband as a primary service	1 (5.9%)
Dark fibre	3 (17.6%)
Wired LLs as a back-up service for resilience purposes	2 (11.8%)
Wireless LLs as a back-up service for resilience purposes	8 (47.1%)
Business broadband as a back-up service for resilience purposes	7 (41.2%)
3G/4G mobile broadband as a back-up service for resilience purposes	2 (11.8%)
Total use of wired LLs (primary or back-up links)	17 (100%)
Total wireless LLs (primary or back-up links)	14 (82.4%)
LL interface used	Number of interviewees
MI LLs	17 (100%)
TI LLs	12 (70.6%)
Are data connectivity services purchased together with voice services	Number of interviewees
Yes	3 (17.6%)
No	14 (82.4%)

A 5.14 End-users of LLs were also asked to indicate the bandwidth of purchased services. 14 interviewees noted that they use LLs with bandwidth of up to 100 Mb/s while 11 interviewees stated that they purchase LLs with bandwidth above 100 Mb/s for at least some of their sites. Typically, high bandwidth LLs are used to connect end-users' headquarters and/or data centres. 11 interviewees also noted that their bandwidth requirements are likely to increase in the next two to three years due to increasing data demands at their premises, the upgrading of ICT equipment and installation of new applications such as video conferencing.

- A 5.15 In terms of SPs, the majority of interviewed end-users of LLs (70.6%) indicated that they seek a single provider for primary data connectivity services to all of their sites (including international sites) while 4 interviewees noted that they tend to break out their sites into separate lots in order to attract bids from several SPs. One interviewee noted that it had to purchase data connectivity services from two suppliers as its main supplier of primary data connectivity services could not provide LL connections to some of its sites.
- A 5.16 However, it should be noted that some interviewees that use multiple SPs indicated that it was due to their preferred SPs' inability to reach certain sites, that they contracted with an alternative SPs (i.e. they used another provider of retail LLs).
- A 5.17 Table 21 lists suppliers that provide wired or wireless retail LLs as primary data connectivity services to interviewees. 47% of interviewed end-users of LLs stated that they purchase services from Eircom followed by BT (41%), Vodafone (29%) and Airspeed (23.5%). In addition, 6 out of 8 interviewees (75%) that were aware whether their SP is relying on third party inputs to provide retail LLs, stated that their SP is relying on Eircom's WHQA products to connect at least some of their customer premises⁸¹².

⁸¹² One interviewee was not aware whether its SP is relying on third party networks to deliver retail LLs to its premises. The remaining 8 interviewees had Eircom as their retail LL SP.

Table 21: Interviewees' suppliers for primary data connectivity services

Whether single or several SPs are used	Number of interviewees ⁸¹³
Single	12 (70.6%)
Several	5 (29.4%)
Eircom	8 (47.1%)
BT	7 (41.2%)
Vodafone	5 (29.4%)
Airspeed	4 (23.5%)
Virgin Media	2 (11.8%)
Three Ireland	2 (11.8%)
Colt	2 (11.8%)
Viatel	2 (11.8%)
Cogent	1 (5.9%)
EU Network	1 (5.9%)
Verizon	1 (5.9%)
Complete	1 (5.9%)
Magnet	1 (5.9%)

A 5.18 The majority of interviewees (13) use a formal tender process when selecting their current provider of data connectivity services, two interviewees have renegotiated their contract terms with existing supplier while the remaining two interviewees noted that they held bilateral negotiations with several SPs.

Table 22: Selection process used by interviewees

Process used to select current supplier	Number of interviewees
Tender process	13 (76.5%)
Renegotiated with existing supplier	2 (11.8%)
Bilateral negotiations with several suppliers	2 (11.8%)

A 5.19 6 out of 17 interviewed end-users of LLs (35.3%) had switched their SP during the most recent selection process. The main cited reasons for switching SP were cost of service and poor experience with previous SP.

A 5.20 Interviewed end-users of LLs were also asked to elaborate their reasoning for selecting one/several suppliers for data connectivity services and key criteria during selection process.

⁸¹³ 5 interviewees mentioned several SPs, thus, percentages indicate the incidence of SPs supplying retail LL services rather than market shares.

A 5.21 Table 23 highlights that the majority of interviewees with single data connectivity supplier chose to do so because it is easier to manage one supplier. Historic reasons (always used the same supplier) and more efficient fault handling were also cited. Amongst interviewees using several suppliers, the most commonly cited reason for doing so was more choice in different areas/regions and better deals.

Table 23: Reasons for using one/several suppliers

Reasons for using one supplier	Number of interviewees
Easier to manage one supplier	8 out of 12
Historic (always dealt with them)	1 out of 12
Easier to handle faults	1 out of 12
Splitting sites into different lots would diminish the bargaining position	1 out of 12
Cheaper/better deals	4 out of 5
More choice in different areas/regions	4 out of 5
One supplier cannot meet all requirements	3 out of 5

A 5.22 All interviewees noted that service availability, service quality (e.g. resilience) and costs were important factors when selecting data connectivity supplier. For the majority of interviewees, however, quality and reliability was more important as cost. Three interviewees explicitly stated that they would only consider suppliers that can provide services using their own networks. Five interviewees that required data connectivity to international sites noted that only SPs with substantial international experience would be considered for the contract.

Interviewees' perceptions of wireless LLs

A 5.23 As indicated in Table 20 above, the majority of interviewed end-users of LLs (14) purchase wireless LLs although only five interviewees use them as their primary links. Two interviewees noted that the decision to purchase wireless LLs was made due to a lack of available fibre infrastructure where their sites are located while another 3 stated that providers of wireless LLs offered better value in terms of bandwidth and price than providers of wired LLs.

A 5.24 It should also be noted that 4 out of 5 interviewees that are currently using wireless LLs as primary data connection links indicated their preference for fibre LLs if these services were available and prices were comparable to prices of wireless LLs. Two of these interviewees stated that they would be willing to pay a premium for fibre LLs.

Table 24: Reasons for using wireless LLs as primary data connection links

Reasons for using wireless LLs as primary data connection links	Number of interviewees
Provider of wireless LLs offered better deal	2 (40%)
Wired LLs were not available	2 (40%)
Provider of wireless LLs offered better service quality	1 (20%)

- A 5.25 ComReg also asked users of wireless LLs about their experience of using these services. The majority of respondents were satisfied with service quality of wireless LLs. In some instances line of sight issues were experienced, but interviewees noted that these issues were quickly resolved by their SP.

Table 25: Interviewees experience of using wireless LLs

Interviewees' views (16 end-users expressed their views) (Multiple responses were given)	Number of interviewees
No major prolonged service issues	10 (62.5%)
Experienced line of sight issues	3 (18.8%)
Installation of antennae was not easily facilitated	2 (12.5%)
Service disruptions due to adverse weather conditions	2 (12.5%)
Negative opinion based on legacy issues	1 (6.3%)
Concerned about security of unlicensed wireless P2P links	1 (6.3%)
Bandwidth is not easily scalable	1 (6.3%)

- A 5.26 Interviewees that are currently using wired LLs as primary data connection links were asked whether they would consider to continue purchasing these services or switch to wireless LLs if the price of wired LLs would increase by 5 to 10%. 5 out of 13 interviewed end-users of LLs who responded to this question, noted that they would consider using wireless LLs if service quality and price were comparable to that offered by SPs of wired LLs. However, it should be noted that two of these interviewees indicated that providers of wireless LLs were not considered as potential suppliers of data connectivity services during the most recent supplier selection process. The remaining 8 interviewees indicated that they would not consider using wireless LLs for primary data connectivity services.

Views on competitiveness of the retail LL market and impact of potential withdrawal of regulation in the MI WHQA Market

- A 5.27 ComReg also sought to obtain interviewees' views on the competitiveness of the retail LL market and their opinion on the impact of potential removal of regulated access to MI WHQA.

- A 5.28 The majority of interviewed end-users of LLs (10) noted that the competitive landscape has improved in recent years and that they were able to obtain better/cheaper deals from SPs (e.g. higher bandwidth for the same price). In this regard, data centres were viewed as particularly competitive with several suppliers offering LL services in these locations. At the same time, 9 interviewees indicated the lack of competition outside of urban centres and in areas where competing fibre networks are not available.
- A 5.29 One interviewee considered backhaul services to be a competitive bottleneck in some geographic areas as traffic from certain Enet MAN's could only be backhauled by Eircom. Another interviewee noted that SPs are unwilling to decouple managed LL services from passive infrastructure (e.g. dark fibre) and stated that routes to Northern Ireland could only be served by Eircom.
- A 5.30 In relation to interviewees' views on potential removal of regulated access to MI WHQA, 10 interviewees indicated that there could be a severe risk to their connectivity and businesses if Eircom decided to withdraw access to its WHQA products. Five of these interviewees stated that their suppliers of data connectivity services are using regulated MI WHQA to connect some of their sites and thus, if these services were withdrawn, it would cause service disruption and potentially higher costs as SPs of retail LLs would have to seek an alternative solution to connect customers' premises.
- A 5.31 One interviewee also noted that removal of regulation would stifle the development of businesses in rural areas where the only available fibre based LLs are LLs provided over Eircom's network.
- A 5.32 Some interviewees noted that rollout of networks to certain sites (e.g. Aviva Stadium) was uneconomic or difficult due to planning restrictions and that Eircom had a significant advantage, because its network was already present in those locations.

Appendix: 6 Updated Trends

- A 6.1 This appendix provides an updated analysis, as of Q4 2016, of the main trends and developments in the retail and WHQA LL markets as were discussed in the 2016 Consultation and further considered elsewhere throughout this Further Consultation.
- A 6.2 The Updated Retail Trends Analysis shows some changes to those trends/developments identified in the 2016 Consultation. In particular, the stalled growth in the uptake of wireless LLs alongside other evidence relied on throughout this Further Consultation has lead ComReg to amend its preliminary view of the Retail HQA Market(s) set out in the 2016 Consultation. In particular, ComReg's preliminary position is that wireless LLs do not fall within the same product market as wired LLs. ComReg highlights the following developments since the publication of the 2016 Consultation, with these discussed further below:
- (a) Migration from TI to MI based LL services has continued during 2016, but at an accelerated rate;
 - (b) Eircom's market share in terms of all retail LLs (TI and MI) has continued to decline with Eircom having [\leq [REDACTED]]⁸¹⁴ of all wired retail LLs at the end of 2016 compared to [\leq [REDACTED]]⁸¹⁵ at the end of 2015.
 - (c) The rate of growth in the uptake of wireless LLs has stalled as the demand for wireless LLs has marginally decreased with 2,651 wireless LLs sold at the end of 2016 compared to 2,775 at the end of 2015.

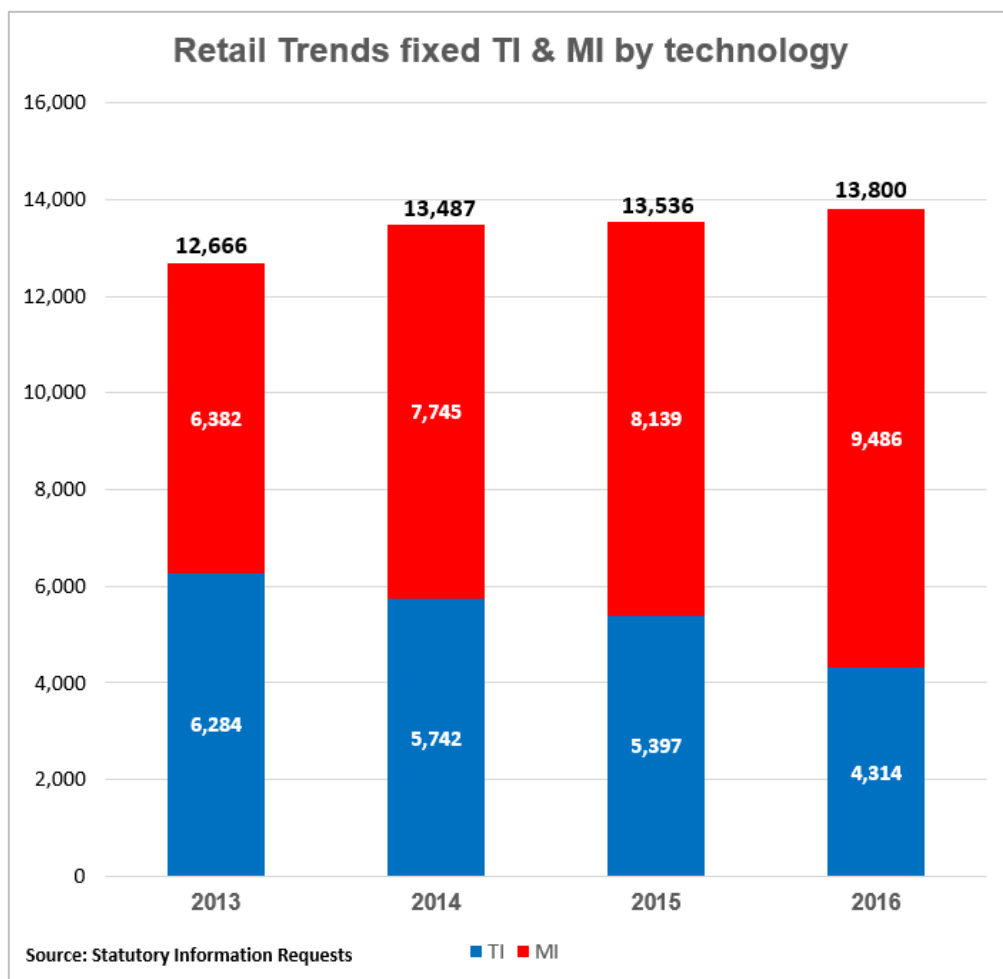
⁸¹⁴ Less than 40%

⁸¹⁵ Less than 40%

Migration from TI to MI based retail LL services

A 6.3 Figure 16: Retail LLs by technology shows that an overarching trend since the 2008 Decision has been an overall increase in demand for retail MI LL services and a steady decline in retail TI LL services. However, the rate of decline in demand for retail TI LLs has accelerated in 2016. In the 12 months to December 2016 the rate of annual decline in the uptake of retail TI LLs was 20.1% compared to 6% in the same period one year ago. In nominal terms, the overall number of retail TI LLs decreased by 1,083 lines in the 12 months to December 2016 compared to 345 lines in the same period one year ago. The demand for retail MI LLs, however, has continued to grow with 9,486 wired MI LLs sold at the end of 2016 compared to 8,139 MI LLs at the end of 2015 (annual growth rate of 16.5%).

Figure 16: Retail LLs by technology



A 6.4 The number of deliveries for various technology access lines in 2016 also reflect this trend with, for example, only [3<] wholesale and [3<] retail TI LLs delivered by Eircom in 2016 ([3<]⁸¹⁶ of all new deliveries in 2016) compared to [3<] wholesale and [3<] retail MI LLs ([3<]⁸¹⁷ of all new deliveries in 2016).

Retail wireless LLs trends

A 6.5 Although ComReg is of the further preliminary view that wireless LLs are no longer part of the Relevant WHQA markets, the changes on the trends are detailed below for completeness.

A 6.6 In the 2016 Consultation ComReg noted a significant increase in the uptake of wireless LLs⁸¹⁸. However, as highlighted in Figure 17: Retail wireless LL demand, the total number of wireless LLs bought at the end of 2016 (2,651) was slightly less than for 2015 (2,775)⁸¹⁹. The growth in the overall number of P2P radio links licences issued by ComReg to all entities operating wireless links⁸²⁰ has also stalled. There were 12,287 live P2P radio links licences as of Q3 2017 compared to 12,227 in Q2 2015 (an increase of 0.5%).

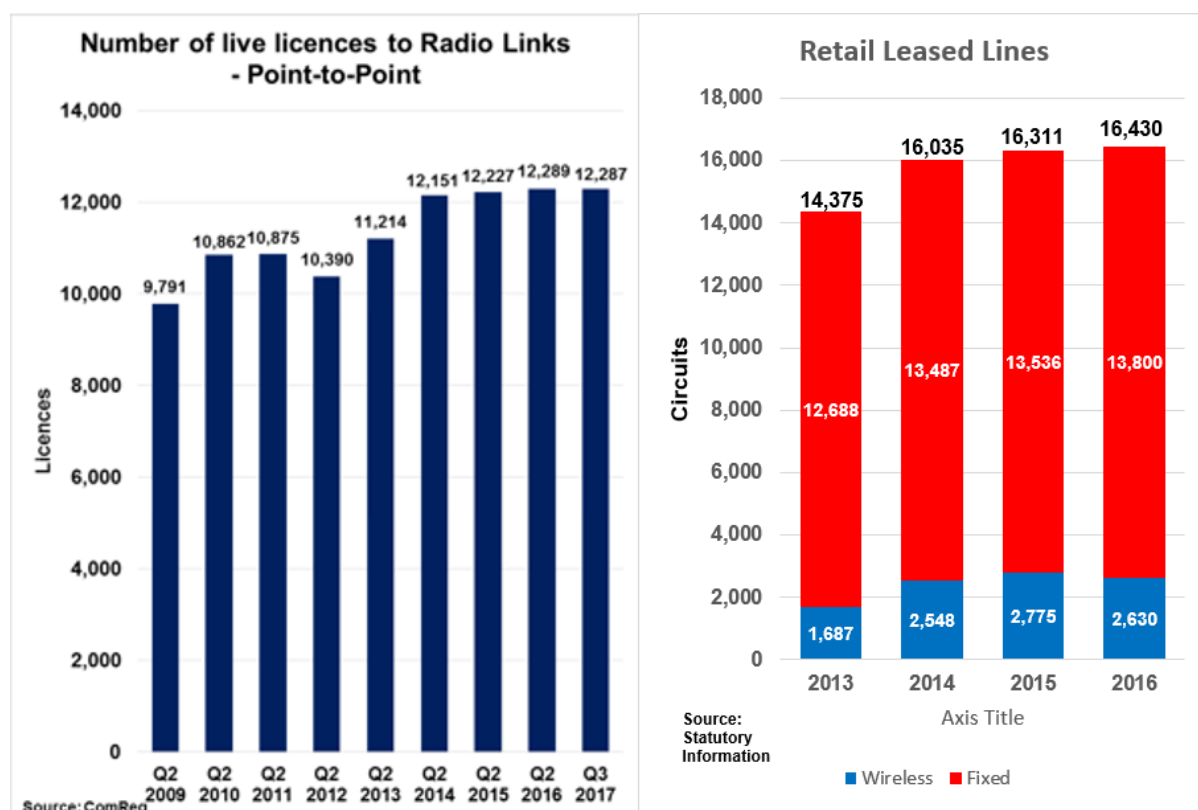
⁸¹⁶ Less than 15%.

⁸¹⁷ More than 70%.

⁸¹⁸ See paragraph 3.39 of the 2016 Consultation.

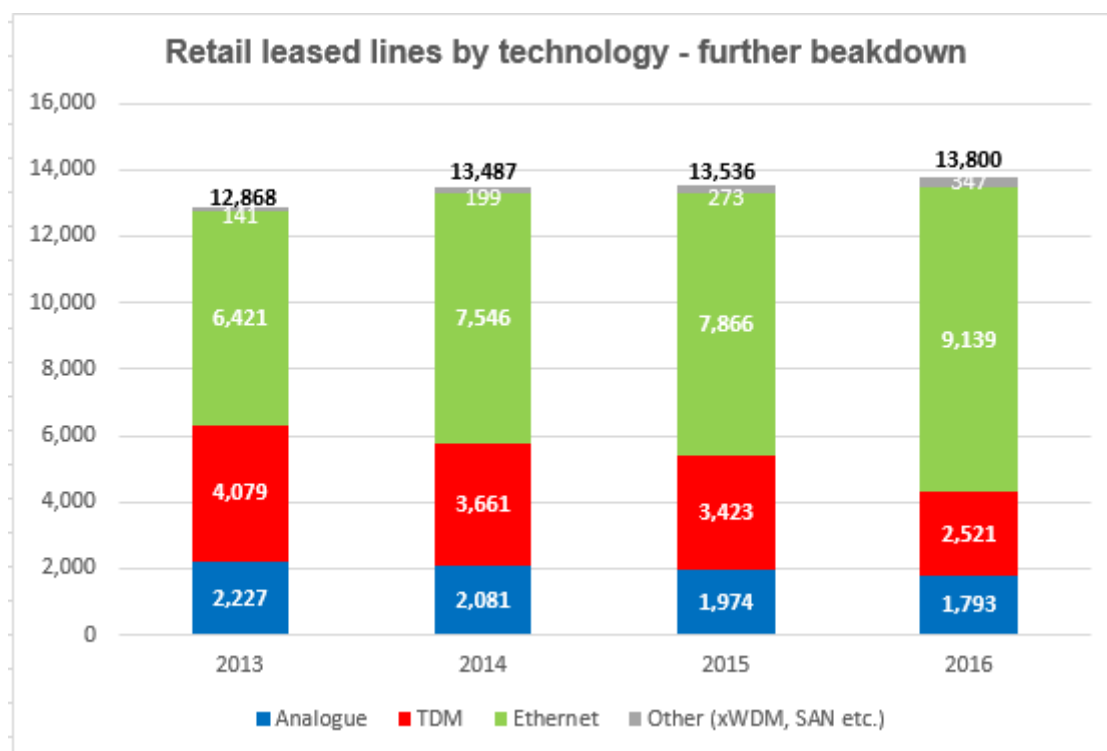
⁸¹⁹ A decrease of 4.5%.

⁸²⁰ The number of P2P radio licences is not correlated with the number of wireless based retail LL. This is because each licence represents one hop (or link) in a connection. Furthermore, P2P radio licences can be used for other services such as mobile backhaul, wholesale LLs and resilience purposes and used by other entities (other than LL SPs) such as Local Authorities. Emergency Services etc.

Figure 17: Retail wireless LL demand

Growth in the take-up of higher bandwidth LLs

- A 6.7 The majority of analogue and TI circuits deliver speeds of equal to or lower than 2Mb/s, while the vast majority of Ethernet circuits are delivering bandwidth in excess of 10 Mb/s. Similarly, the number of circuits based on technologies such as xWDM that are capable of delivering very high bandwidth capacity in excess of 10 Gb/s is also growing with 347 such circuits sold in 2016 up from 273 in 2015.
- A 6.8 The demand for higher bandwidth Ethernet LLs has continued to grow in 2016 particularly in the 100 Mb/s speed category with 2,654 Ethernet retail LLs of 100Mb/s bandwidth sold at the end of 2016 compared to 2,068 in the 2015. In this regard, ComReg notes that interviewed Multi-site retail LL customers indicated to ComReg that their bandwidth requirements are likely to increase in the next two to three years due to increasing data demands at their premises, the upgrading of ICT equipment and installation of new applications such as video conferencing. Figure 18: Retail leased lines by technology – further breakdown demonstrates the increase purchase of high bandwidth xDWM and similar services.

Figure 18: Retail leased lines by technology – further breakdown

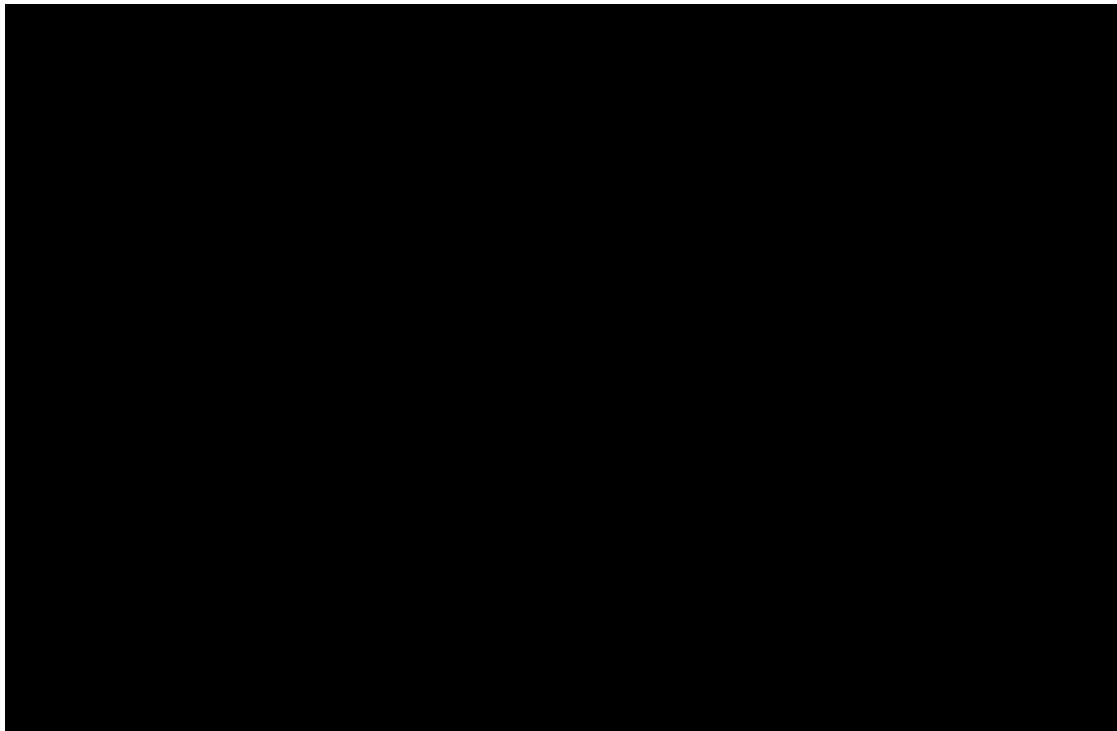
Developments in Eircom's WHQA sales

A 6.9 Below ComReg details changes in Eircom's wholesale sales that are used in part to support retail LL demand.

A 6.10 In the 2016 Consultation ComReg noted that Ethernet based LL formed the majority [3<] of Eircom's sales of all WHQA products⁸²¹. Figure 19 below indicates that the demand for Eircom's Ethernet WHQA products has increased by [3<] since 2015 and it has outpaced the declining demand for Eircom's TI WHQA products. As of Q4 2016, Ethernet WHQA products accounted for [3<] of all WHQA products sold by Eircom.

⁸²¹ See paragraph 5.30 of the 2016 Consultation.

Figure 19: Eircom's WHQA product sales by technology [REDACTED]

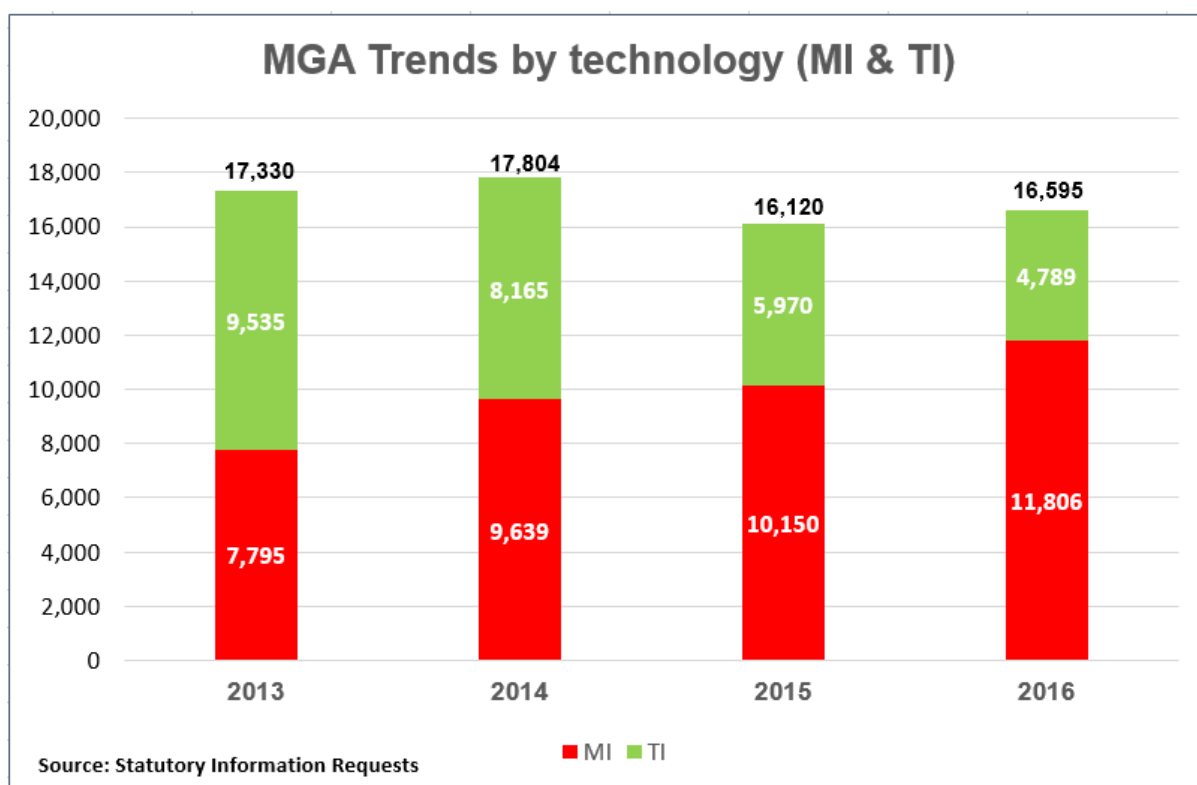


Migration from TI to MI based wholesale and retail LL services

A 6.11 The overall migration from TI to MI is confirmed in Figure 20 below where MGA totals for both MI and TI are shown for the years 2013 to 2016. The overall volumes have not increased uniformly which is explained by the replacement of a significant volume of 2Mb/s TI circuits which were purchased for mobile backhaul. This demand was switched to higher bandwidth MI purchased in the merchant market however, a significant proportion dropped out of the market and were replaced with self-supplied MI circuits.

A 6.12 The MGA TI and MI market shares and overall volumes are shown in Figure 20 and Figure 21 below. These again, confirm the trend of migration from TI to MI and the high market shares of Eircom in the TI markets⁸²², increasing over the years from [redacted]⁸²³ in 2013 to [redacted]⁸²⁴ in 2016. Its share of the MI market has increased slightly from [redacted]⁸²⁵ in 2013 to [redacted]⁸²⁶ in 2016.

Figure 20: TI to MI Migration Modified Greenfield Approach – Circuits volumes



⁸²² The circuit volumes for the LB and HB TI have been conflated here –HB totals are negligible

⁸²³ Over 65%

⁸²⁴ Over 75%

⁸²⁵ Over 40%

⁸²⁶ Over 45%

Figure 21: TI WHQA On-Net Market Shares and overall circuit volumes 2013-2016 [REDACTED]

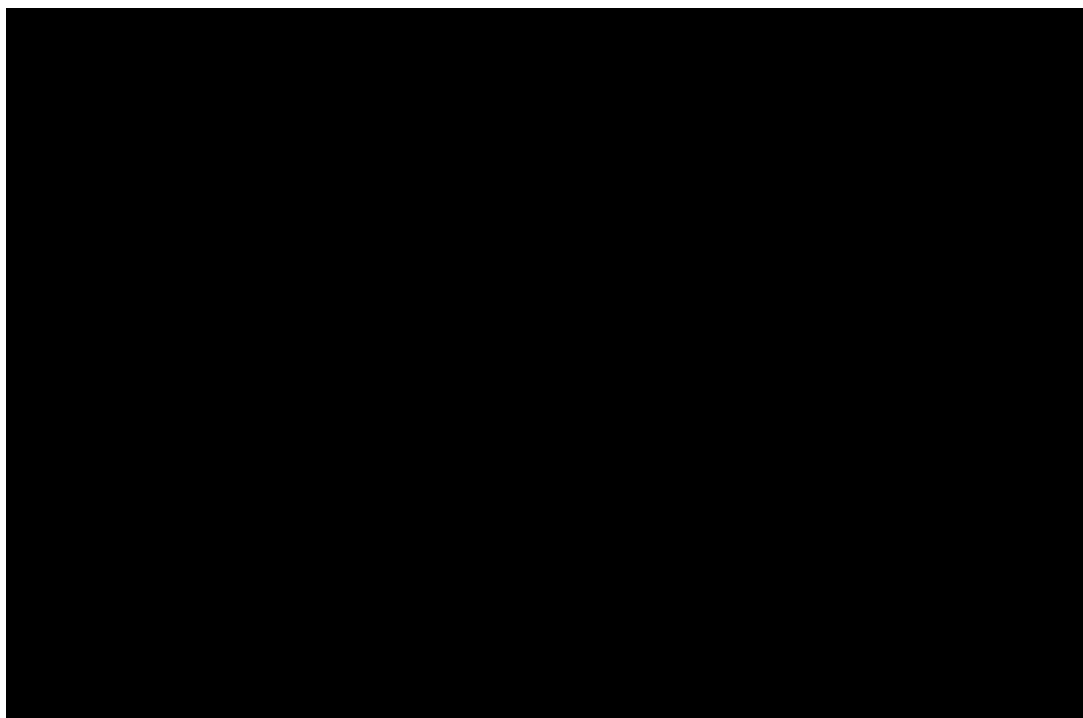
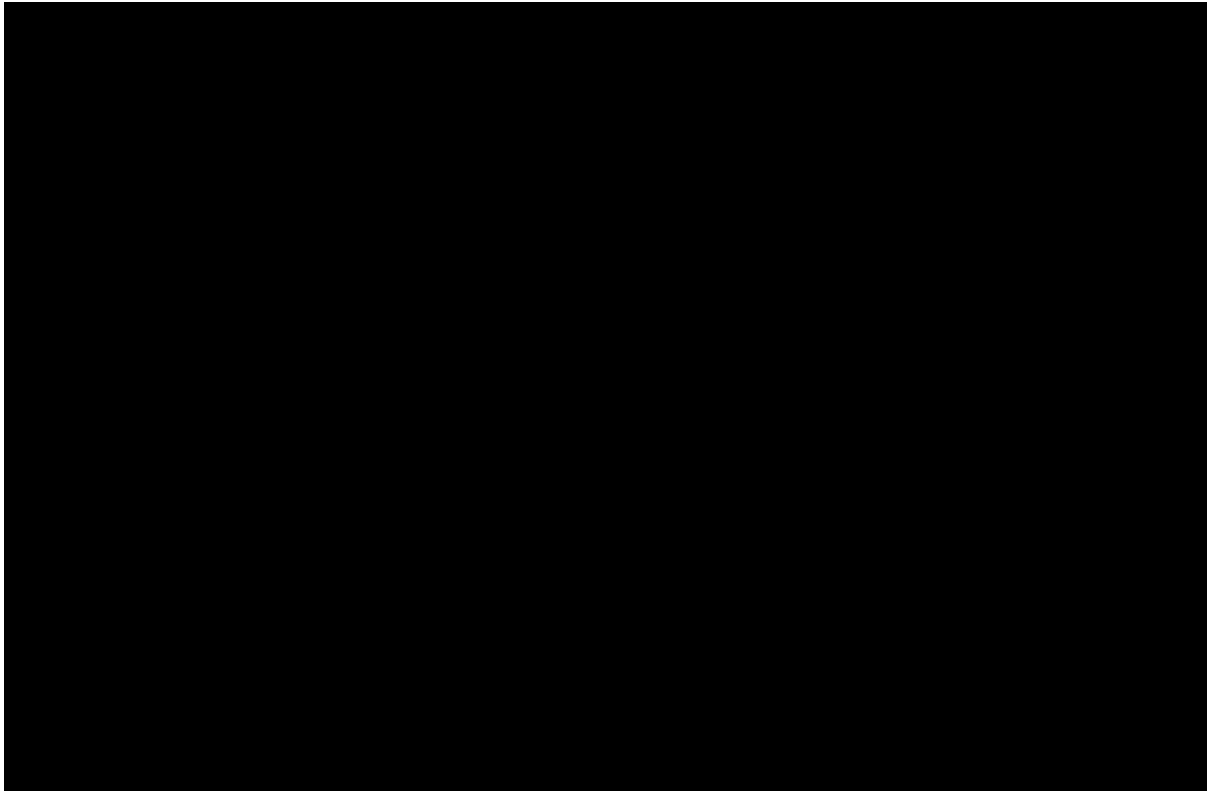


Figure 22: MI WHQA On-Net Market Shares and overall circuit volumes 2013-2016 [REDACTED]



Appendix: 7 Further Consultation Questions

A 7.1 Below is a list of questions set out throughout this Further Consultation.

Question 1:	Do you have any further observations on ComReg's Retail Market Assessment?
Question 2:	Do you agree with ComReg's further preliminary conclusions on the definition of the Relevant WHQA Markets? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views
Question 3:	Do you agree with ComReg's further preliminary conclusions on the assessment of competition within the Relevant WHQA Markets, including the proposed designation of Eircom as having SMP, as appropriate? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your view.
Question 4:	Do you have any further observations on this Section 6 concerning competition problems in the LB TI WHQA Market?
Question 5:	Do you have any further observations on this Section 7 concerning obligations in the LB TI WHQA Market?
Question 6:	Do you agree that the competition problems and the associated impacts on competition consumers identified are those which could potentially arise in the Zone B MI WHQA Market? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views
Question 7:	Do you agree with ComReg's approach to imposing access, non-discrimination, transparency, price control and cost accounting and accounting separation remedies in the Zone B MI WHQA Market? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views

Question 8:	Do you agree with ComReg’s draft Decision Instrument set out in Appendix: 4, in particular, that its wording accurately captures the intentions expressed in this Section 9? Do you agree with ComReg’s Definitions and Interpretations as set out in Part I of the Draft Decision Instrument? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers in the Draft Decision Instrument to which your comments refer.
Question 9:	Do you agree with ComReg’s approach on the withdrawal of all existing obligations in the HB TI WHQA Market and the Zone A MI WHQA Market and withdrawal of the obligation to provide WLLs in the LB TI WHQA market? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views
Question 10:	Do you agree with ComReg’s preliminary conclusions on the Regulatory Impact Assessment for the MI WHQA Markets? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your position.

Appendix: 8 List of Eircom Trunk and Non-trunk Nodes

Table 26: List of Eircom Trunk Nodes and number of other SPs⁸²⁷ with network in close proximity

No.	Eircom Trunk Node	No. SPs	No.	Eircom Trunk Node	No. SPs
1	ARDEE	3	54	LETTERKENNY	3
2	ATHENRY	2	55	LIMERICK	6
3	BALBRIGGAN	2	56	LISTOWEL	2
4	BALLINA	4	57	LITTLE ISLAND	2
5	BALLINASLOE	3	58	LONGFORD	3
6	BALLINCOLLIG	2	59	LOUGHREA	3
7	BEGGARS BUSH	3	60	LUCAN BALLYDOWD	11
8	BLANCHARDSTOWN	2	61	MALAHIDE	2
9	BLARNEY	2	62	MALLOW	3
10	BRAY	2	63	MERRION	5
11	BRIDGEND	2	64	MERVUE	4
12	CAHERDAVIN	3	65	MIDLETON	2
13	CARLOW	3	66	MULLINGAR	4
14	CARRICK-ON-SUIR	2	67	NAAS	3
15	CARRIGALINE	2	68	NANGOR ROAD	2
16	CASTLETROY	3	69	NAVAN	4
17	CHURCHFIELD	5	70	NEWCASTLE WEST	2
18	CITYWEST	2	71	NORTH MAIN	2
19	CITYWEST HOSTING CENTRE	9	72	NUTLEY	6
20	CK-ON-SHANNON	2	73	PARK WEST	7
21	CLANE	2	74	PHIBSBORO	2
22	CLAREMORRIS	2	75	PORTLAOISE	5
23	CLONEE	11	76	PORTMARNOCK	2
24	CLONMEL	4	77	PRIORY PARK	5
25	CLONSHAUGH	12	78	QUAKER ROAD	5
26	CLONTARF	5	79	RATHEDMOND	4
27	COOLOCK	3	80	RATHLUIRC	2
28	CORK CENTRAL	5	81	ROCHESTOWN	3
29	CROWN ALLEY	7	82	ROSCOMMON	2
30	CRUMLIN	2	83	ROSLEVIN	4
31	CUSTOMS HS DOCKS	3	84	RUSH	3
32	DENNEHYS CROSS	4	85	SANDYFORD	2
33	DOLPHINS BARN	4	86	SANDYFORD AEH	4
34	DONABATE	2	87	SANTRY	3
35	DOORADOYLE	5	88	SHANNON TOWN	3

⁸²⁷ Enet "CMANs" (open access Government owned MAN with 'competitive' backhaul access) are weighted as being equivalent to 2 SPs.

36	DOUGLAS	2	89	SHANTALLA	4
37	DROGHEDA	4	90	SHIP STREET	7
38	DROICHEAD NUA	2	91	SKERRIES	2
39	DUNBOYNE	4	92	SUMMERHILL	2
40	DUNDALK	4	93	SUTTON	2
41	DUNLAOGHAIRE	2	94	SWORDS	2
42	EASTPOINT	4	95	TALLAGHT	7
43	ENNISCORTHY	2	96	TERENURE	2
44	FINGLAS	3	97	THURLES	2
45	FOXROCK	2	98	TIPPERARY	2
46	GALWAY	4	99	TRALEE	3
47	GORT	2	100	TRIM	4
48	GREYSTONES	2	101	TULLAMORE	2
49	HETTYFIELD	2	102	WALKINSTOWN	7
50	HEUSTON SOUTH QUARTER	2	103	WATERFORD	2
51	KILCOCK	3	104	WATERFORD TYCOR	3
52	KILKENNY	4	105	WELLINGTON ROAD	5
53	KILLARNEY	2	106	WEXFORD	2
			107	WHITEHALL	2

Table A9.2 List of Eircom Non-trunk nodes –one or no other SP nearby

No.	Eircom Non-trunk Node
1	ARKLOW
2	ASHBOURNE
3	ASKEATON
4	ATHLUNKARD
5	ATHY
6	BALLINROBE
7	BALLYBODEN
8	BALLYBOFEY
9	BALLYMOTE
10	BANDON
11	BANTRY
12	BELCAMP
13	BETTYSTOWN
14	BIRR
15	BLESSINGTON
16	BUNCRANA
17	CABRA
18	CARNDONAGH
19	CARRICKMACROSS
20	CARRIGTWOHILL
21	CASHEL
22	CASTLEBAR
23	CASTLEREA
24	CAVAN
25	CEANANNUS
26	CELBRIDGE
27	CHARLESTOWN

No.	Eircom Non-trunk Node
44	FERRYBANK
45	GLANMIRE
46	GOREY
47	GRANARD
48	KANTURK
49	KENMARE
50	KILDARE
51	KILLORGLIN
52	KILRUSH
53	KINSALE
54	KNOCKBOY
55	LEIXLIP
56	MACROOM
57	MAHON
58	MAYNOOTH
59	MOATE
60	MONAGHAN
61	MUINE BHEAG
62	NENAGH
63	NEW ROSS
64	NEWLANDS CROSS
65	NEWTOWNMTKENNEDY
66	ORANMORE
67	PALMERSTOWN
68	PORTARLINGTON
69	RATHCOOLE
70	RATHMINES

28	CLIFDEN
29	CLONAKILTY
30	COBH
31	COSTELLO
32	DONEGAL
33	DUNDALK BLACKROCK
34	DUNDRUM
35	DUNGARVAN
36	DUNGLOE
37	DUNSHAUGHLIN
38	EDENDERRY
39	ELPHIN
40	ENFIELD
41	ENNIS
42	ENNISTYMON
43	FERMOY

71	RATHMORE
72	RATOATH
73	ROBERTSTOWN
74	ROSCREA
75	SHANKILL
76	SKIBBEREEN
77	TARA
78	TRAMORE
79	TUAM
80	TULLOW
81	VIRGINIA
82	WELLINGTON BRIDGE
83	WESTPORT
84	WICKLOW
85	YOUGHAL

Appendix: 9 Practical application of Remedies in the Zone B MI WHQA market

- A 9.1 The purpose of the appendix is to explain how ComReg envisages how its proposed remedies would apply in practice in order to allow SPs access Zone B MI WHQA services. This was explained briefly in paragraphs 4.257 to 4.259 and in greater detail in the proposed Access Remedies outlined in Section 9.5.1 above.
- A 9.2 Figure 23 below depicts a proposed Aggregation Region⁸²⁸ where the pair of Primary Edge ('PE') Nodes are directly connected to the Aggregation Nodes within the Aggregation region.
- A 9.3 Primary Edge nodes⁸²⁹ are larger capacity nodes situated higher in the network hierarchy to which every Aggregation Node within an Aggregation Region is connected. There are two edge nodes in each Region. All exchanges which contain an Edge Node have been classified as "Trunk Nodes."
- A 9.4 Aggregation Nodes are classified as Trunk Nodes where there are three or more Service Providers ('SPs') providing MI WHQA services that are present or nearby.⁸³⁰

⁸²⁸ 'Aggregation Region' means a group of Aggregation areas where each Aggregation Node is directly connected to a pair of Primary Edge ('PE') Nodes.

"Aggregation Node" or "AGG node" means a network concentration point for Access Paths.

"Access Path" means the connection from the NTU/ONT in the End User's premises to the Point-of-Handover. The Points-of-Handover for physical unbundling are the MDF (for metallic) and the ODF (for fibre) in the Exchange, and the Point-of-Handover for non-physical unbundling (virtual access) is the Wholesale Ethernet Interconnection Link at the serving Aggregation Node for the End User i.e. at the MPoP;

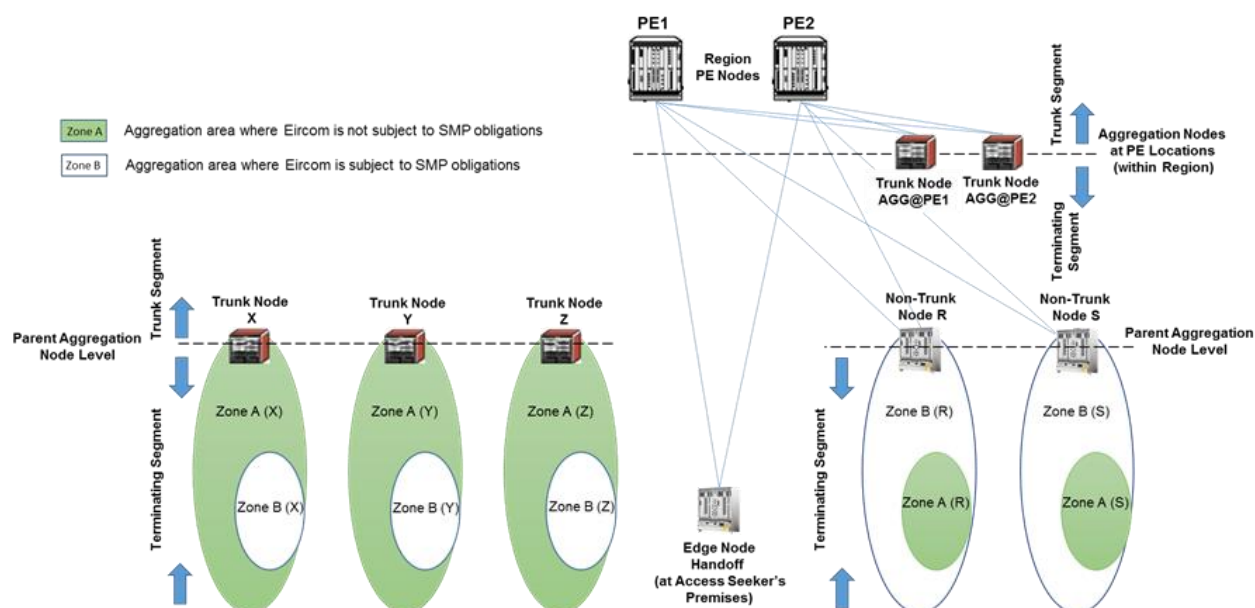
Aggregation Area means the geographical area served by an Aggregation Node. Note that the Aggregation Area is those Exchange area(s) as defined by Market 3a (Wholesale Local Access).

⁸²⁹ PE Nodes are always co-located with Aggregation Nodes in an Eircom Exchange. While Interconnection is not available at a PE Node, the traffic can be accessed via the Aggregation Node located in the same exchange as the PE Node.

⁸³⁰ Nearby means within circa 100 metres.

- A 9.5 Aggregation Nodes are classified as Non-Trunk Nodes where there are fewer than three SPs providing MI WHQA services that are present or nearby.
- A 9.6 **'Zone A'** signifies those parts of an Aggregation area where Eircom is not subject to SMP obligations. **'Zone B'** signifies those parts of the Aggregation area where Eircom is subject to SMP obligations.

Figure 23: MI WHQA Market – Aggregation Regions



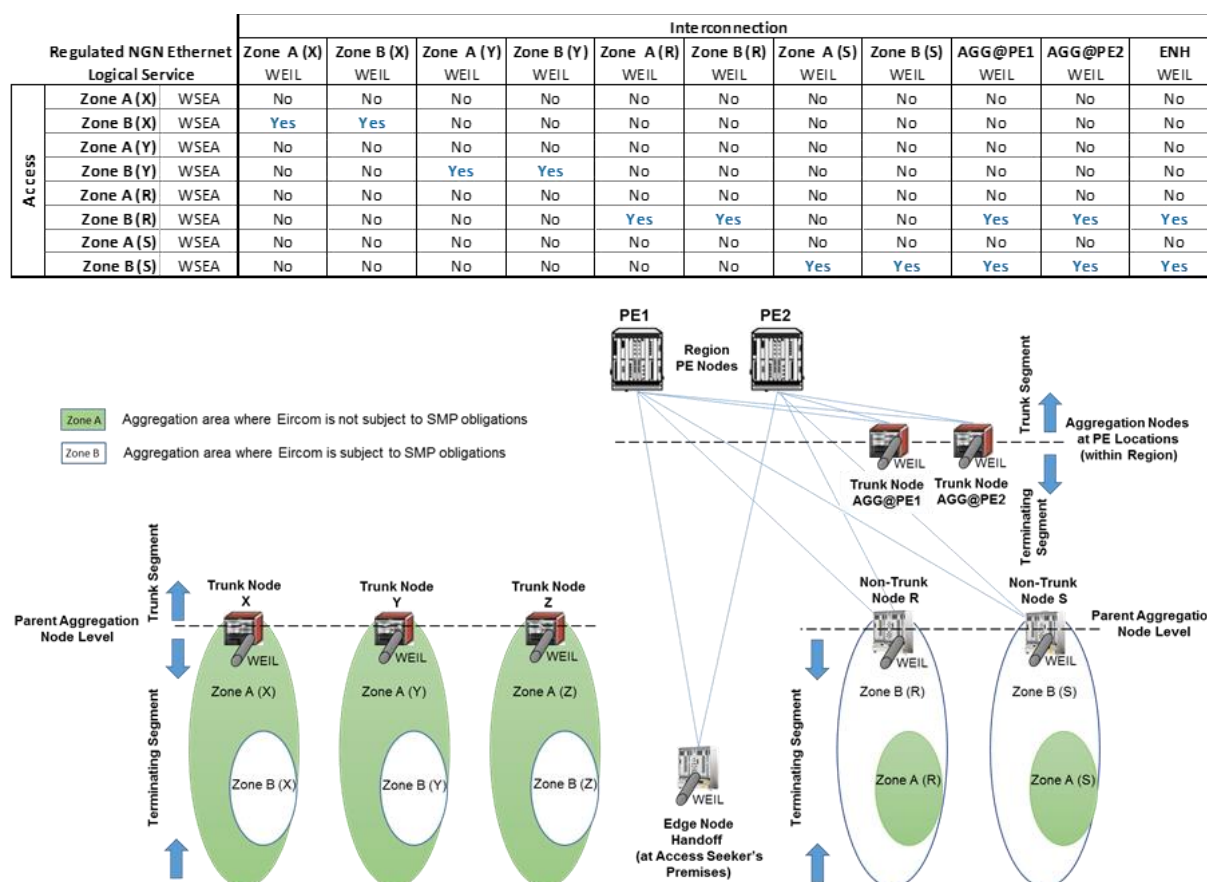
- A 9.7 ComReg's preliminary view is that the scenarios where MI WHQA is subject to Access Obligations⁸³¹ are:
- Traffic from access circuit in Zone B to associated Trunk Node Interconnect (e.g. traffic between Zone B (X) and Interconnection from Trunk Node X, outlined in Figure 23 above); and
 - Traffic from access circuit in Zone B to associated Non-Trunk Node Interconnection or Trunk Node Interconnection at PE Node location or Edge Node (Handoff) Interconnection (e.g. traffic between Zone B (S) and Interconnection from Non-Trunk Node S or Trunk Nodes AGG@PE1/AGG@PE2 or Edge Node Handoff, also outlined in Figure 18 above).

⁸³¹ "Access Regulations" means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011), as may be amended from time to time.

- A 9.8 Eircom will be required to deliver MI WHQA services (e.g. data traffic) from locations in Zone B to an appropriate Aggregation Node in order that the Access Seeker has the opportunity to access the competitive trunk market. Specifically traffic may be handed off at a Non Trunk Aggregation Node if the particular Access Seeker is present in that node; otherwise the traffic must be handed off at the Trunk Node co-located with a corresponding Edge Node.
- A 9.9 Regulated MI WHQA NGN Ethernet logical services will terminate on a WEIL at the appropriate Aggregation Node(s) as depicted in Figure 24 below.
- A 9.10 Focusing on regulated MI WHQA NGN Ethernet services in the Aggregation area associated with a Trunk Node X:
- (a) A regulated MI WHQA NGN Ethernet logical service from Zone A (X) WSEA is not required to be provided by Eircom;
 - (b) A regulated MI WHQA NGN Ethernet logical service from Zone B (X) WSEA to trunk node X, is required to be provided by Eircom, so that the service can terminate on a WEIL at Trunk Node X (Zone A or Zone B) i.e. at the associated Aggregation Node;
 - (c) A regulated MI WHQA NGN Ethernet logical service from Zone B (X) WSEA to an Edge Node (i.e. ENH at Access Seeker's premises) in the Aggregation Region is not required to be provided by Eircom.
- A 9.11 From a pricing perspective, the regulated MI WHQA NGN Ethernet services available in Aggregation area X will be 'Same Node'⁸³².

⁸³² 'Same Node' means that the WSEA and WEIL services are delivered from the same Aggregation Node.

Figure 24: MI WHQA Market Aggregation Region - Regulated MI WHQA NGN Ethernet Logical Service



A 9.12 Focusing on MI WHQA NGN Ethernet services required to be provided by Eircom in the Aggregation area associated with Non-Trunk Node R:

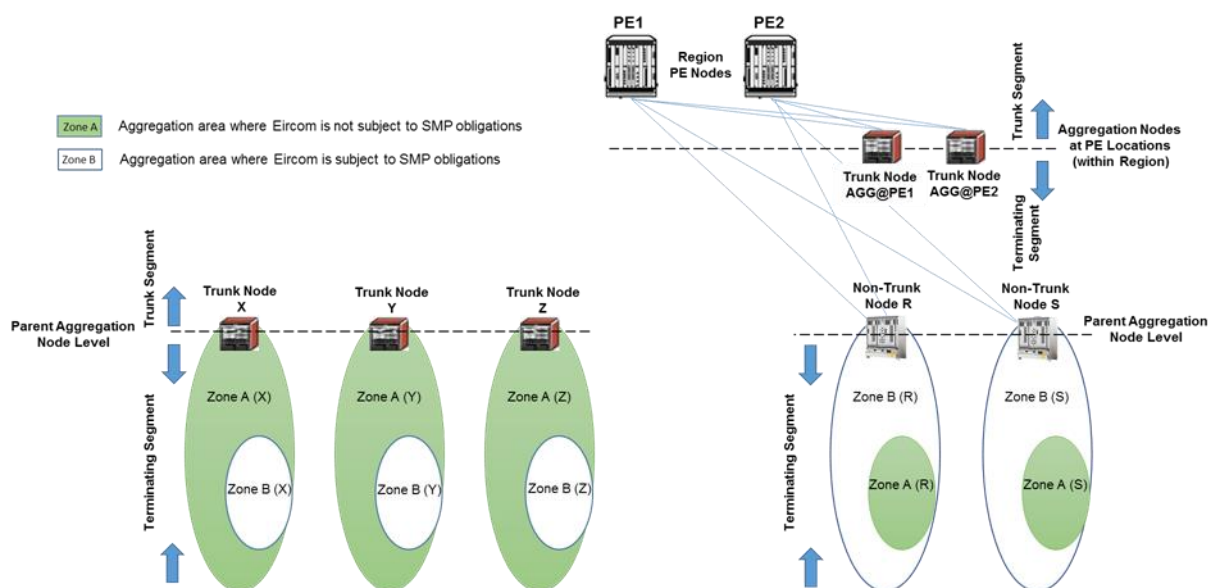
- A regulated MI WHQA NGN Ethernet logical service from Zone A (R) WSEA is not required to be provided by Eircom;
- An Access Seeker must have the ability to connect an access circuit in Zone B (where Eircom is subject to SMP obligations) to an Interconnection circuit. A MI WHQA NGN Ethernet logical service from Zone B (R) WSEA, is required to be provided by Eircom, and can terminate either on a WEIL at Non-Trunk Node R (Zone A or Zone B) if the Access Seeker is present in that Node or, if it is not present at the Non Trunk Node at either of the two Trunk Nodes located at the PE exchanges (AGG@PE1, AGG@PE2) i.e. at the associated Aggregation Nodes;
- A MI WHQA NGN Ethernet logical service, required to be provided by Eircom, from Zone B (X) WSEA can terminate on an Edge Node (i.e. ENH at Access Seeker's premises) within the Aggregation region.

A 9.13 From a pricing perspective, the regulated NGN Ethernet services available in Aggregation area R will be 'Same Node', 'Same Region' or 'ENH Same Region' as appropriate.

A 9.14 MI WHQA WDM services required to be provided by Eircom will terminate at the appropriate Aggregation Node(s) as depicted in Figure 25 below.

Figure 25: MI WHQA Market Aggregations Region – Regulated MI WHQA WDM Service

Regulated WDM Service		WUP Interconnect					
		Zone A (X)	Zone A (Y)	Zone A (R)	Zone A (S)	PE1 Exchange	PE2 Exchange
Access	Zone A (X) WUP end	No	No	No	No	No	No
	Zone B (X) WUP end	Yes	No	No	No	No	No
	Zone A (Y) WUP end	No	No	No	No	No	No
	Zone B (Y) WUP end	No	Yes	No	No	No	No
	Zone A (R) WUP end	No	No	No	No	No	No
	Zone B (R) WUP end	No	No	Yes	No	Yes	Yes
	Zone A (S) WUP end	No	No	No	No	No	No
	Zone B (S) WUP end	No	No	No	Yes	Yes	Yes



A 9.15 Focusing on MI WHQA WDM services, required to be provided by Eircom, in the Aggregation area associated with Trunk Node X:

- A regulated MI WHQA WDM service from Zone A (X) is not required to be provided by Eircom;
- A regulated MI WHQA WDM service from Zone B (X) can terminate as a WUP Interconnect in Zone A (X).

A 9.16 Focusing on MI WHQA WDM services, required to be provided by Eircom, in the Aggregation area associated with Non-Trunk Node R:

- (a) A regulated MI WHQA WDM service from Zone A (R) is not required to be provided by Eircom;
- (b) A MI WHQA WDM service from Zone B (R), required to be provided by Eircom, can terminate at a WUP Interconnect associated with Non-Trunk Node R or at a WUP Interconnect associated with either of the two PE exchange locations.

A 9.17 Eircom's NGN Ethernet and WDM network architectures are different and not exact overlays of each other. The WDM network is used to provide the high capacity central core and the Ethernet network elements (Primary, Edge and Aggregation Nodes) are usually connected via the WDM core network. There may be some Nodes connected using native Ethernet connections, particularly to sub-tended Nodes where WDM deployment may not be commercially justified. The Ethernet network is effectively a secondary network which "is built upon" or "hanging off" the primary WDM network. ComReg therefore proposes that the NGN Region boundaries are applied for all MI WHQA services (where this is applicable for services which must be handed over at the Edge Node Exchanges). To use a different boundary for each service would introduce undue complications into the operation of the proposed WDM service for little benefit to either SPs or End Users. This approach of using the NGN Ethernet architecture as defining regions and exchange areas simplifies the management of MI WHQA products, services and facilities for Eircom.

A 9.18 To summarise, Eircom would be obliged to provide Interconnection Services at the 107 Trunk Node Exchanges in order to hand-over MI WHQA services which originate in the Zone B areas of each individual Trunk Node aggregation area. For MI services which originate in the Zone B areas of the remaining 85 Non-Trunk Nodes, Eircom would be obliged to hand over this traffic either at the respective Non-Trunk node or at either of its PE Node Exchanges.

A 9.19 The reasoning supporting this proposed approach is that every Aggregation Node has a physical or logical connection to both PE Nodes in its Aggregation Region. Eircom is therefore likely to have existing WDM/Ethernet transmission capacity between these nodes or to be able to more easily expand capacity as required. It would be extremely difficult to nominate any other Nodes for handover within the same Aggregation Region based on simple geographic location or distance criteria. Such Nodes could be subject to capacity constraints due to pre-existing fibre route designs and capacity/transmission arrangements which would severely hamper the introduction of new and potentially large sources and sinks of ingress and egress traffic.

A 9.20 Table 27 below summarises the twelve NGN Ethernet regions and the locations of each PE Node.

Table 27: WHQA Market - Twelve NGN Ethernet Aggregation Regions

Region Number	Eircom Region Reference	PE Node 1 Location	PE Node 2 Location
1	Urban A	Beggars Bush (BBH)	Priory Park (PRP)
2	Urban B	Blanchardstown (BDT)	Fingalas (FNG)
3	Urban C	Belcamp (BLP)	Summerhill (SRL)
4	Urban D	Nangor Road, Clondalkin (CLD)	Dolphins Barn (DBN)
5	Urban E	Churchfield (CHF)	Quaker Road (QKR)
	Provincial J	Churchfield (CHF)	Quaker Road (QKR)
6	Urban F	Limerick (LMK)	Mallow (MLW)
	Provincial K	Limerick (LMK)	Mallow (MLW)
7	Provincial N	Limerick (LMK)	Portlaoise (PGS)
8	Urban G	Mervue (MVW)	Shantalla (SLA)
9	Urban H	Priory Park (PRP)	Waterford (WTD)
	Provincial O	Priory Park (PRP)	Waterford (WTD)
	Provincial P	Priory Park (PRP)	Waterford (WTD)
10	Provincial I	Bridgend (BGE)	Rathedmond, Sligo (RTD)
11	Provincial L	Drogheda (DBC)	Mullingar (MGR)
12	Provincial Z	Roslevin, Athlone (RSL)	Rathedmond, Sligo (RTD)

Appendix: 10 List of Acronyms

Table 28: List of acronyms frequently used throughout this Consultation.

Acronym	Full Title
3CT	Three Criteria Test
AAC	Average Avoidable Cost
AS	Access Seeker
ATC	Average Total Cost
ATM	Asynchronous Transfer Mode
AVC	Average Variable Cost
BEREC	Body of Economic Regulators for Electronic Communications
BU	Bottom Up
CATI	Computer Aided Telephone Interview
CBP	Countervailing Buying Power
CCPC	Competition and Consumer Protection Commission
CCTV	Closed Circuit Television
CGA	Current Generation Access
CoS	Class of Service
CPE	Customer Premises Equipment
CSH	Customer sited Handover
DI	Decision Instrument
DSL	Digital Subscriber Line
EC	European Commission
EFM	Ethernet Final Mile
EOI	Equivalence of Inputs
EOO	Equivalence of Outputs
ERG	European Regulators Group (replaced by BEREC)
EU	European Union

EUL	End User Link
FR	Frame Relay
FTTC	Fibre to the Cabinet
FTTH/B	Fibre to the Home/Building
FTTx	Fibre to the x
FWA	Fixed Wireless Access
FWALA	Fixed Wireless Access Local Area
GN	Government Network
HB	high Bandwidth
HDSL	High Speed Digital Subscriber Line
HFC	Hybrid Fibre Cable
HM	Hypothetical Monopolist
HMT	Hypothetical Monopolist Test
HQA	High Quality Access
HQA Provider	Operators offering HQA services
IA	Internet Access
ICT	Information and Technology
IP	Internet Protocol
ISDN	Integrated Services Digital Network
ISH	In-Span Handover
KPI	key Performance Indicator
LB	Low Bandwidth
LL	Leased Line
LLU	Local Loop Unbundling
LRAIC	Long Run Average Incremental Cost
LRAIC plus	Long Run Average Incremental Cost plus
MAN	Metropolitan Area Network
MEA	Modern Equivalent Asset

MGF	Modified Greenfield
MI	Modern Interface
MLA	Main Link Access
MLD	Main Link Distance
MMDS	Multichannel Multiservice Distribution System
MNO	Mobile Network Operator
MPLS	Multiprotocol Label Switching
MSE	Management Services Entity
MST	Margin Squeeze Test
NG	Next Generation
NGA	Next Generation Access
NGN	Next Generation Network
NRA	National Regulatory Authority
NTU	Network Termination Unit
OAO	Other Authorised Operator
OSS	Operational Support Systems
P2P	Point to Point
PABX	Private Automated Branch Exchange
PDH	Plesiochronous Digital Hierarchy
PoA	Price on Application
PoH	Point of Handover
PoP	Point of Presence
PPC	Private Partial Circuit
PSTN	Public Switched Telephone Network
QKDR	ComReg Quarterly Key Data Report
RCBS	Retail Business Connectivity Services
SaaS	Software as a Service
SDH	Synchronous Digital Hierarchy

SEO	Similarly Efficient Operator
SIP	Session Internet Protocol
SIR	Statutory Information Request
SLA	Service Level Agreement
SME	Small to Medium Enterprise
SMP	Significant Market Power
SP	Service Provider
SSNIP	Small but Significant Non-transitory Increase in Price
TDM	Time Domain Multiplex
TDM	Top Down
TI	Traditional Interface
TL	Transport Link
VDSL	Very High Speed Digital Subscriber Line
VoIP	Voice over Internet Protocol
VPN	Virtual Private Network
WAN	Wide Area Network
WEIL	Wholesale Ethernet Interconnection Link
Wholesale LL	Wholesale Leased Line (generic term for wholesale service)
WHQA	Wholesale High Quality Access
WLL	Wholesale Leased Line (refers to Eircom wholesale product)
WLL	Wholesale Leased Line
WSEA	Wholesale Symmetrical Ethernet Access
xDSL	x Digital Subscriber Line (any DSL technology)
xWDM	Wavelength Division Multiplexed (coarse or dense)
ZONE A	Geographic Area relating to Zone A MI WHQA market
ZONE B	Geographic Area relating to Zone A MI WHQA market