

# Information Notice: ComReg Document 18/08 - Wholesale High Quality Access at a Fixed Location

## Response to Requests for Clarifications

#### **Information Notice**

Reference: ComReg 18/28

Version: Final

**Date:** 13 April 2018

### **Additional Information**

Document No:	18/28
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- On 22 of February 2018 ComReg published a further consultation, response to consultation and draft decision concerning its review of the Wholesale High Quality Access ('WHQA') Markets, namely ComReg Document No. 18/08<sup>1</sup> (the 'Further Consultation').
- 2. On the 23 March 2018 ComReg issued an information notice, namely ComReg Document No. 18/25² ('March Information Notice'), extending the deadline for responding to the Further Consultation to 27 April 2018. The March Information Notice also detailed a process whereby stakeholders could submit requests for clarifications on aspects of the Further Consultation, and to submit any such requests ("Clarification Request(s)") in writing to ComReg by the 30 March 2018.
- 3. ComReg received 31 Clarification Requests from 2 stakeholders, namely Eircom and BT. ComReg has detailed these Clarification Requests and its response to them in Annex 1 of this Information Notice.
- 4. In the March Information Notice ComReg noted that it reserved the right not to provide clarifications. There have been five issues raised in four separate Clarification Requests that ComReg considers fall outside the scope of the clarification process and accordingly ComReg has, where indicated below, not responded to these.
- 5. Annex 1 below provides details of the Clarification Requests received and ComReg's response to them.

<sup>&</sup>lt;sup>1</sup> Wholesale High Quality Access at a Fixed Location; Response to Consultation, Further Consultation and Draft Decision. See <a href="https://www.comreg.ie/publication/market-review-wholesale-high-quality-access-consultation/">https://www.comreg.ie/publication/market-review-wholesale-high-quality-access-consultation/</a>

<sup>&</sup>lt;sup>2</sup> See https://www.comreg.ie/publication/information-notice-consultation-whqa-market-review/

## **Annex 1 – Clarification Requests**

Please note that the terminology and abbreviations used herein are identical to those used in the Further Consultation. See Appendix 10 of the Further Consultation for more details.

Please also note that in some cases ComReg has separated clarification requests within a particular question number, having labelled them as A, B, C, etc. in both the 'Clarification Being Sought' and 'ComReg Response' columns.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg	ComReg Response
Eircom	1	Can ComReg clarify why technical observations which should be factual in nature and capable of validation have been redacted in paragraph 3.38 "Enet argued that ComReg attached too much weight to HEAnet's purchasing decisions to use wireless LLs and noted that many retail endusers 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 [3< ]. In Enet's view, these factors merit the exclusion of wireless LLs from the proposed retail product markets. Can ComReg unredact this information?	18/08	3.38	The information was redacted because it was deemed to be confidential. However, in general the issues highlighted related to similar reasons set out by other SPs in paragraph 3.37 (b) of the Further Consultation, namely lower service levels.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
Eircom	2	eir would like to confirm with regard to Criterion 1 what constitutes the presence of an Alternative Network (AN)? In terms of 'touching' a Small Area (SA), does this mean that a mapped AN needs to at some point intersect with the SA boundary? There appears to be some differences in the language used in various paragraphs that refer to Criterion 1. i.e. sometimes the requirement refers to ANs 'touching' an SA and sometimes it refers to ANs 'within' an SA. Can ComReg confirm the exact requirement?	18/08	4.151, 4.168, 4.192	The presence of an Alternative Network ('AN') at a Small Area refers to any instance where an AN touches, intersects, runs along the boundary of, or in any other way traverses a Small Area.  For example, if an AN is routed on a road which itself forms the boundary of 2 adjacent Small Areas, the AN is considered to touch both Small Areas.  As noted in paragraph 4.172 of the Further Consultation, for mapping purposes, ANs were allocated a width of 20 metres in order to account for differences in the accuracy of the network maps that were provided by Service Providers ('SP(s)').
Eircom	3	Can ComReg confirm for the purposes of AN presence that fibre on the CIE rail network i.e. enet and BT is considered as two ANs?	18/08	4.151, 4.168, 4.192	Yes, where two are more SPs other than Eircom have network in a particular Small Area, ComReg confirms that the Small Area is considered to have two ANs present.  However, as noted in paragraph 4.173 of the Further Consultation, break-out for the purposes of providing MI WHQA is only considered possible at certain locations on the CIE rail network (for example at train stations where local break-out is possible).
Eircom	4	In determining that 100m is the correct benchmark for network reach analysis, does the 'evidence gathered' referred to in paragraph 4.159 only include the information provided by the 5 local	18/08	4.159	Yes, the 100 metres criterion is based primarily on the information gathered from the 5 Local Authorities identified in footnote 353 of the Further Consultation. As stated in paragraph 4.159, timeframes in excess of 3 months for wayleaves could impact on the ability

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
		authorities contacted or is there additional evidence?			of SPs to tender for the on-net provision of on-net MI WHQA services.
Eircom	5	Can ComReg confirm the point where the radial distance criterion was applied from i.e. for a connected premises is this from the centre of the premises in question or does this vary premises by premises on the basis of the data available for a particular address?	18/08	4.159	For the purpose calculating the distance from a premise to a relevant network(s), the following sequence of steps was undertaken to obtain the location of connected premises.  Firstly, the information provided by SPs to ComReg on the location of connected premises were geocoded with the Google Application Programming Interface ('API') for Google Maps.  When there was a full business name and at least the main street address of that business available in the address provided by the SP, a "POI" (point of interest) was obtained. This corresponded to the centre location of that particular premise and it was from this point that the orthogonal distance of 100 metres was calculated.  Secondly, in cases where the Google API did not provide a precise POI because the address information provided by the SPs was not accurate enough to generate one, several combinations of the partial address information provided were searched (Name/Adress1/Address2/Town/County) in order to obtain the most precise location of the particular connected premise. In those instances, the entrance of the premise (not the centre) was located.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
					The above processes are described in Table 4 of the Tera Report, ComReg Document 18/08a under the heading "Details of information loaded into API tool".
Eircom	6	In calculating the distance from currently served premises to AN infrastructure, does this include ANs that are present in adjacent SAs (i.e. all networks present inside or outside the SA) or only ANs that are present in the relevant SA being examined i.e. that has already met criterion 1?	18/08	4.168 (b)	The first statement in this question provides the correct understanding. As such, when calculating the distance from a relevant premise to ANs, the boundaries of the SAs have been disregarded.
Eircom	7A B	In determining the distance of premises (for potential demand) within an SA from SPs' networks, are multi-site retail LL customer premises the only premises considered?  In contrast do 'current demand' premises include all premises currently connected to MI WHQA services, whether these are multisite customer or otherwise? Paragraph 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."	18/08	4.168 (c), 4.192 (c)	<ul> <li>A. Yes, only retail users that purchase at least one leased line but have multiple locations were considered for potential demand.</li> <li>B. Yes, current demand included all premises currently connected by MI WHQA LLs, irrespective of the number of premises at which the particular customer has a presence.</li> </ul>

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
Eircom	8	Is there an excel file available that lists the small areas as shown in Figure 9 that meet criterion 1 and also those that don't? If so is it possible for ComReg to share this with respondents? In addition can ComReg also provide in that same file the list of SAs that meet criterion 2a and 2b and those that don't as well as the resulting list of SAs in Zone A and Zone B?	18/08	Figure 9	Yes. These are available in Appendix 2: ComReg Document 18/28a of this Information Notice.
Eircom	9	Clarification on 'This resulted in 465 SAs having more than four connected premises'. Footnote 384 and paragraph 4.203 suggest that the criterion is four or more rather than more than four. Can ComReg confirm?	18/08	4.201, 4.203	The phrase 'more than four' is a typographical error and is incorrect.  It should state '4 or more'.
Eircom	10	Should the following highlighted text refer to 2b rather than 2a? "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".	18/08	4.203	Yes, the highlighted '2a' in this instance is a typographical error and it should read Criterion '2b'.
Eircom	11	Can ComReg confirm that in the application of criterion 2a or 2b, no rounding is applied  i.e. taking the example for assessment under 2a where there are 4 connected	18/08	4.202, 4.206	ComReg confirms that rounding does not apply. Only discrete whole numbers are used for counting premises.  The % of relevant premises that meet the Criteria in 2a and/or 2b is either <75% or >=75% of the total

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
		premises, 75% of this is 3.75. eir's understanding is that the algorithm used means no rounding applies but rather that a greater than or equal to criteria is applied. Can ComReg confirm and provide a detailed, explicit and clear explanation of the manner in which this is applied?			number of relevant premises situated in a particular Small Area.  For example, if there are 8 relevant premises in a small area and 6 of them are within 100 metres of 2 or more ANs, then this means that the relevant criterion is met given that 6/8 = 0.75 or 75%.  However, if there are 9 relevant premises in a small area and only 5 of them are within 100 metres of 2 or more ANs then this means that the relevant criterion is <u>not</u> met given that 5/9 = 0.556 or 56% which is less than the 75% criterion.
Eircom	12 A B	eir would like to understand what a WUP variant of WEIL would look like as well as the rationale for offering an interconnect to a dedicated point to point circuit such as WUP.  Can ComReg clarify how it sees this proposal working in practice? It would be helpful to understand any precedence.  Can ComReg therefore provide examples of this being done elsewhere so that eir can determine how such a proposal may be implemented?	18/08	9.64 (b)	A. ComReg has proposed in the Further Consultation that the current xWDM customer premises end-to-end product is replaced with an uncontended Wavelength Division Multiplexing ('WDM') Wholesale High Quality Access ('WHQA') that can be considered as two segments of a WDM WHQA circuit, namely;  i. a WDM access connection to either a customer premises (CSH) or to a Colocation facility in an Eircom exchange (IBH), situated in Zone B; and  ii. a WDM Interconnection Service (CSH or ISH).
					B. The last 2 clarification requests are not considered to be clarification requests, but

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
		Can ComReg clarify if there has been a request from Industry for this type of product?			requests for further information. As such, they are considered outside of the scope of this clarifications exercise.
Eircom	13	Can ComReg provide a copy of the questionnaire that was used when conducting face-to-face interviews with the 17 multi-site retail LL end-users?	18/08	Appendix 5	Yes, a copy of the questions for interviews with endusers of LLs is provided in Appendix 1 of this Information Notice.
Eircom	14	Can ComReg provide a description of the shortlisting criteria used to identify the 35 multi-site LL customers who were contacted as potential interviewees?	18/08	A5.7	As set out in paragraph A5.6 and Table 19 of the Further Consultation, the customers were chosen to represent a sufficiently broad spectrum of users from various industries, including, retail finance, retail grocery, agribusiness, construction, professional services, ICT services, and the public sector including the commercial public sector.
Eircom	15	Can ComReg provide summary data for the questions noted in this paragraph, in particular respondents rating of the importance of various factors when making their purchasing decision?	18/08	A5.22	Although ComReg requested that the various criteria listed in Question 9 of the Retail Survey Questions be considered by interviewee respondents in ascending order of importance, in practice this did not occur. Instead, interviewees informed ComReg of the main critical factors that were important from their perspective. This has been summarised in paragraph A5.22 of the Further Consultation.  As such, ComReg cannot provide the data in the format asked for in Question 9 of the Retail Survey Questions.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
Eircom	16	Is Appendix 5 a summary of key issues or does it include all summary data of interviewee responses? If there is additional summary data, can ComReg provide this?		Appendix 5	Appendix 5 is a comprehensive summary of all information and data gathered from the interviewee responses, subject to the protection of confidential information.
BT	1 А В	<ul> <li>Has a common data set been used for the ENTIRE Further Consultation? It does not seem so.</li> <li>Figure 4 references data from Q2 2016</li> <li>s4.188 references that the data source for Potential Demand is April 2016 SIR (based on Dec 2015)</li> <li>s5.44 references that 'at the end of 2016, no SP had a market share of over 50%'</li> <li>footnote 11, 'issued April 2017 for data pertaining to end of year 2016'</li> <li>In particular, S4.223 calls out that no SP has more than 45% of Zone A and that Eircom have more than 70% of Zone B. It is reasonable to assume that Eircom is</li> </ul>	ComReg 1808-1 ComReg1 801a-1	Main Report: Page 61, Figure 4 Page 153; s4.188; Page 189 s5.44; Page 165; s4.223 Annexe: Page 10, footnote 11	<ul> <li>A. No, the relevant period associated with data is typically cited alongside the data. With respect to the data referred to in the specific bullet points, there is only one dataset used for each year with the exception of 2016. Data for 2016, save for the exceptions noted below, predominantly refers to data as at Q4 2016<sup>3</sup>. The exceptions to this are the data referred to in Figure 4, Figure 6, Table 2, Table 4, and table 6, each of which are based on data as at Q2 2016<sup>4</sup>.</li> <li>B. ComReg clarifies that paragraph 4.188 of the Further Consultation contained an error when referring to "the April 2016 SIR". This should refer to "the April 2017 SIR". Therefore, the retail customer list referred to in paragraph 4.188, used to determine the potential demand for MI WHQA provided by SPs covering the period as at Q4 2016.</li> </ul>

<sup>3</sup> Data based on responses to a Statutory Information Request (SIR) issued by ComReg to Service Providers (SPs) in April 2017.

<sup>&</sup>lt;sup>4</sup> Data based on responses to a SIR issued by ComReg to SPs in September 2016.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
	D	the SP with no more than 45% of Zone A. Applying 41% of the Zone A connected premises and 71% of the Zone B connected premises — gives a market share of 51%.  S5.44 calls out that at the end of 2016, no SP had a market share of over 50%.  Are these two statements based on the same dataset?			<ul> <li>C. The reference to "the end of 2016" in paragraph 5.44 of the Further Consultation means data as at the end of Q4 2016.</li> <li>D. No, paragraph 5.44 of the Further Consultation refers to the national market shares in the HB TI Market while paragraph 4.223 refers to the market shares in the Zone A MI WHQA Market and Zone B MI WHQA Markets.</li> </ul>
BT	2 A	Can ComReg un-redact the entries in Table 4.3 classified as CMAN, as there are multiple descriptions of the three network definitions used for MAN & "Private Man". For example, compare the description for the treatment of UMAN in 4.176 versus Annex 8 page 8.  Can ComReg share the KMZ mapping file used to represent the CMAN, i.e. the publically owned network asserted to be "Open Access" and weighted as equivalent to two private alternative network providers.	ComReg 1808-1 ComReg 1808a-1	Main Report: Page 149, s.4176; Page 143, s4.155 Annexe: Page 28 Table 4.3 & Pg 8	<ul> <li>A. For clarity a 'competitive' MAN (CMAN) is a publicly owned open access network with alternative non-eircom backhaul available to it i.e. backhaul from 2 Service Providers, other than Eircom (one of these may be enet's own backhaul network).</li> <li>B. No. This information was identified as being confidential.</li> </ul>
ВТ	3	The footnote states that where 'market shares which are entirely dependent on Eircom are attributed to Eircom i.e. the SP	ComReg 1808-1 and ComReg	Main Doc:	Yes, in Table 15, the number of circuits and market share for Total Eircom includes the UMANs and any other circuits of alternative SPs dependant on Eircom for backhaul.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
		could not likely provide the service if Eircom inputs were not available to it'  If this holds, why do Virgin "access islands accessible only via Eircom" and E-Net U-MAN feature in Table 15? Are these shares included in the "<45%" market share assigned to Eircom	1annex	Page 165, Table 15 and s4.223 Annex: Page 7, footnote 3	
ВТ	4	Please confirm that in the selection of the 'within 100 metres' parameter for the analysis, that this was based on 7 days being 'a reasonable time' to access the site, not 3 months	ComReg 1808-1	Page 144, s4.159	The 7 days refers to the lead-time for granting of a way leave by a local authority, and not the time it takes to physically access a site by an SP.
ВТ	5	As per the Further Consultation, the relatively new OpenEir Duct & Pole Offer is viewed as valid means of gaining access to customer premises for SPs. BT has no experience of any Duct & Pole deliveries from OpenEir, and instead has found significant obstacles to using that offer in the context described. Can ComReg share evidence from OpenEir that this service has been delivered successfully to SPs and the range of delivery days please from order date to delivery date?	ComReg 1808-1	Page 145, s4.160	In the Further Consultation, ComReg noted that regulated upstream wholesale passive access products could be used by SPs to get access to customer premises. ComReg did not comment in the Further Consultation on the efficacy, or otherwise, of Eircom's Duct and Pole offerings.  In view of this, ComReg is not commenting further, except to note that the availability or otherwise to regulated wholesale passive access products was not materially relevant to the specific adoption of the 100 metres distance criterion.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
ВТ	6	Have Comreg applied a "relevance floor" to its selection of operators active in the market – e.g. Operators with less than 1% measured market share?	ComReg 1808-1	Page 150, footnote 365	No "relevance floor" was applied to the selection of SPs active in the market. All MI WHQA SPs have been considered in the analysis.
BT	7	The data shared by ComReg for BT Zone A connected premises #/%, confirms that the market share % is the count of connected premises/total count of connected premises. Are we correct in thinking that the sum of connected buildings will therefore sum to a number greater than the number of actual buildings?	ComReg 1808-1	Table 15, page 165	Yes.
ВТ	8 A	Why are areas with no relevant buildings within them called out as being part of Zone A, assuming they meet the Criterion 1, ca817? Is this a mistake, to categorize an area with no relevant buildings as competitive?  Can Comreg please supply a list of the CSAs within each of the CSA categories 2a, 2b and 'No Relevant Premise'	ComReg 1808-1	Page 158, s4.207	A. The reasons for particular SAs being assigned to Zone A or Zone B are detailed in Section 4.4.4 of the Further Consultation and specifically in relation to Small Areas containing no relevant premises in paragraphs 4.207 and 4.208.  Furthermore, ComReg does not consider this to be a clarification but a request for additional information. As such, it is outside the scope of this clarifications exercise.
					B. Yes. These are available in Appendix 2; ComReg Document 18/28a of this Information Notice.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
ВТ	9 A	The report calls out that each network was allocated a thickness of 20 metres. Criterion 2 (a), counts the # of connected premises within 100 metres from the SP's network.  Can you confirm that this approach could entail the actual distance from the operator's network could be up to 120 metres (4.172 calls out the network reach was 'extended' by 20 metres)?  Are there instances where the virtual "thickness" of the operators' network leads to it being included in two separate areas by virtue of the boundary lying	ComReg 1808a-1 ComReg 1808a-1	Main document: Page 148, s4.172 Annexe: Page 18, s3.1	<ul> <li>A. A total orthogonal distance of 100 metres from each connected premise to alternative networks of SPs was used in criterion 2a. See the response to Eircom's question 5 for a more detailed explanation on the calculation of the distance from the premises to the alternative networks.</li> <li>B. Yes, when a network, (which were extended by 20 metres to account for differences in the accuracy of the mapping information provided by SPs) touches, intersects, or in any way traverses the boundary of an SA, it is considered to be present at that SA. Finally, please note that ComReg does not understand what is meant by</li> </ul>
BT	10	within the 100m zone (as suggested in Tera Report P18, Section 3.1)?  BT note ComReg's response to Vodafone's request for a representation by sector following the 'Consultation'. BT acknowledge the extensive work/analysis undertaken by ComReg in this 'Further Consultation'. However, BT believes that this additional data cut by sector to be important in understanding competition in the market. Can Comreg provide a breakdown of the market by sector or at	ComReg 1808-1	Page 202, 5.76	the reference to 'a boundary lying within the 100m zone.'  ComReg does not consider this to be a clarification but a request for additional information. As such, it is outside the scope of this clarifications exercise.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
		least the % of the market accounted for by the public sector.			
BT	11 A	Please explain why there is a mix in approach between 2(a) and 2(b)? Specifically,  • Why have a threshold of 4=+ for	1808,	Table 13, Page 159	A. The rationale for the approach to mapping relevant premises is detailed in Section 4.4.4 of the Further Consultation and specifically in relation to the 2a Criterion in paragraphs 4.201
	В	2(a) but no threshold for 2(b)?			and 4.202 of the Further Consultation.
	С	<ul> <li>Why refer to all SPs' on-net customer base for 2(a) but only a subset for 2(b) (retail multi-site)?</li> <li>Why distinguish between current and potential demand when there is no extrapolation used of the</li> </ul>			B. The rationale for the approach to mapping relevant premises is detailed in Section 4.4.4 of the Further Consultation and specifically in relation to potential demand in paragraphs 4.184 - 4.188 and in paragraphs 4.203 - 4.206 of the
		existing customer base for growth			Further Consultation.
	D	We ask ComReg to re-present Table 13 using a consistent approach please			C. The rationale for the approach to mapping relevant premises is detailed in Section 4.4.4 of the Further Consultation and specifically in relation to distinction between current and potential demand in paragraphs 4.179 - 4.189 of the Further Consultation.
					It should be noted that ComReg considers that the extra information being sought in relation to questions 11 A-C are a request for additional information. As such, it is outside the scope of this clarifications exercise.

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg	ComReg Response	
				Doc.		
					D. ComReg does not consider this to be a clarification but a request for additional information. As such, it is outside the scope of this clarifications exercise.	
BT	Questions requesting data and modelled outputs that ComReg used to model the BT network with a view to enabling us to provide an educatated and informed response. This consultation is based on a high degree of mapping and modelling and it is both reasonable and proportionate that operators should be allowed to check the mapping and how the assumptions informed the modelled output.					
BT	12	Please share with BT the elements of BT's rail/core network that were included in the review please – where the conditions met those included in 4.174?	ComReg 1808-1	Page 148, s4.174	All of the core network details as provided by BT to ComReg in response to SIRs have been considered in the analysis when assessing the Trunk/Terminating Boundary. BT's local access network was used for the consideration of the terminating segments market analysis. BT therefore have access to its own information.	
ВТ	13	Please share the list of CSAs that are deemed to be served by the BT Network.	ComReg 1808c	1808c_Appe ndix_3_zone _A_B.xlsx	ComReg refers BT to the network maps it submitted in response to the SIR issued by ComReg to its in April 2017 and also to Appendix 2 of the Further Consultation containing a Map of Ireland broken into the relevant geographic markets. Furthermore, Appendix 3 of the Further Consultation provides a list of these Small Areas that make up the relevant geographic markets.	
ВТ	14	S4.222 references'MI WHQA connected premises' and presents these by operator in Table 15. Please confirm	ComReg 1808	s4.222 Page 164 & Table 15, Page 165	In accordance with paragraph 1.67 of the Further Consultation, ComReg offered to provide SPs with their own information which had been redacted in the Further Consultation. BT submitted a request to ComReg for this information on the 9 March 2018	

Stake- holder	No	Clarification Being Sought	ComReg Doc. No.	Reference in ComReg Doc.	ComReg Response
		the <u>CIRCUIT COUNT</u> for BT in that population/data set by Zone.			and this information was provided to BT by ComReg in 15 March 2018.
BT	15	Please confirm that the list of CSAs in the attached are intersected by 2 or more ANs. We are unable to confirm these findings with our data of the market.	ComReg 1808	Ref. 4.198 page 155, 4.201 page 157 and 4.206 of 158.	These are available in Appendix 2; ComReg Document 18/28a of this Information Notice.

## **Appendix 1: Questions for Interviews with end-users of LLs**

Please note that these questions are a guide to the areas and topics that ComReg would like to touch upon in the survey.

#### Introduction and services used

- 1. Who are/is the primary decision maker in your organisation for choosing suppliers for data connectivity services?
- 2. What is your annual budget for telecommunications services? How this budget is split by voice & data and further between equipment and telco services? (ComReg is not interested in recording ICT spend on hardware).
- 3. How many premises are connected in Ireland? Where are they located and how does this impact of your data connectivity requirements?
- 4. How many of your premises are connected by leased lines? (Please notes -this specifically excludes DSL or equivalent broadband lines).
- 5. Are these requirements bundled with other telecoms (voice/data) requirements? Please specify these if this is the case

#### Purchasing decision making and switching suppliers

- 6. What is the mechanism by which you chose connectivity suppliers? Is it by tender, preferred supplier, etc.
- 7. If you use a tendering process, how often does this process take place?
- 8. If you use a tendering process, which supplier(s) won the process in the most recent tender? Which other suppliers were in the top 3 of the process?
- 9. What are the main criteria by which you chose or score suppliers (in ascending order of importance)? Price, reliability, sole supplier, geographic coverage? International connectivity to your foreign sites? etc.
- 10. When did you last switch suppliers of connectivity services if at all?
- 11. If you have switched suppliers, what was the main criteria which lead to that switch (in ascending order of importance)? Price, reliability, technology used etc.?
- 12. Do you split your leased line requirements between different suppliers (for access/connectivity services) e.g. use different suppliers for different areas or technologies?

13. Do you know if your suppliers use other 3rd party Telecoms operators to connect to some/all your premises? E.g. do they rent lines from intermediaries to connect to some of your premises where they do not have their own infrastructure?

#### **Technologies used**

- 14. What are the leased line technologies that your organisation uses for data and voice connectivity services? Ethernet leased lines, Traditional leased lines? VoIP and/or traditional PSTN services and PABX (e.g. ISDN).
- 15. What are the bandwidths of these lines if known? (in Mb/s).
- 16. Do your suppliers use any point-to-point (P2P) microwave radio links for the provision of leased line services? (Please note this refers to licensed dedicated wireless links which require the installation of specialised antennae/dishes usually on the roof of your premises and does NOT refer to 3G or 4G mobile/dongle based services or equivalent).
- 17. If you do not currently use this P2P wireless technology, would you consider using it if it were cheaper than using fibre or copper where it was able to offer the same level of service?
- 18. If you currently use P2P wireless technology, how satisfied are you with this service?
- 19. If you would not consider using P2P wireless technology for the provision of leased lines services what are the reasons for this?
- 20. What back-up resilience arrangements if any do you have in place for data connectivity? E.g. diverse or alternative access e.g. dual access or fall-back 3/4G access?

#### **Future Connectivity requirements**

- 21. Do you expect your data and data connectivity requirements to increase within the next 2 to 3 years, in terms of a. number of premises b. bandwidth requirements?
- 22. Do you have any plans to upgrade your data platforms/services and corresponding connectivity services within the next 2 to 3 years? If yes, what connectivity services are you likely to purchase?
- 23. What major technology changes/developments do you anticipate happening over the next 2 to 3 years?

#### **View on Suppliers & Connectivity Development**

- 24. Have prices for leased line & associated connectivity services reduced or increased over the past 2 or 3 years?
- 25. Has competition increased over the past number of tenders for connectivity services that you have issued?

# Appendix 2: List of Small Areas meeting Criteria 1, 2a and 2b

A list of the CSO Small Areas is published in a separate document, namely in ComReg Document 18/28a in spreadsheet form. Each Small Area is listed as meeting (or not) the various Criteria set out in Section 4.4.4 of the Further Consultation.