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Communications Regulation

Multi-band Spectrum Release

Response to Consultation on the draft Information Memorandum

Response to Consultation

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Chapter 1

1 Introduction

- 1.1 The purpose of this document is to set out ComReg's Response to Consultation on the draft Information Memorandum as set out in Document 11/75.¹ Document 11/75 was published following ComReg's draft decision on the multi-band spectrum release as set out in Document 11/60², and it set out ComReg's proposals to implement the Award Process as then detailed in Document 11/60.³
- 1.2 Since Document 11/75 was published, ComReg has published its Response to Consultation and Decision on its multi-band spectrum release proposal[s] covering the 800 MHz, 900 MHz and 1800 MHz spectrum bands, as detailed in Document 12/25⁴. A number of the issues raised by respondents to Document 11/75 have already been considered and decided upon in Document 12/25 (which includes Decision 04/12) and where this has occurred, this document will refer readers to the relevant sections of Document 12/25.
- 1.3 In light of its Decision as set out in Document 12/25 and its consideration of all relevant outstanding issues in this Response to Consultation document, ComReg has, in tandem with this publication, also published the text of its final Information Memorandum for the multi-band spectrum release covering the 800 MHz, 900 MHz and 1800 MHz bands, in Document 12/52.
- 1.4 ComReg's policy is to publish all non-confidential material received in relation to matters under consultation and it refers interested parties to the following ComReg publications:
- Document 12/49 – Publication of relevant correspondence provided by respondents since Document 12/25 (and ComReg written responses to same) – Published 25 May 2012;

¹ Document 11/75 – Draft Information Memorandum on Multi-band Spectrum Release - published 24 October 2011.

² Document 11/60 and 11/60a – Response to Consultation and Draft Decision on a Multi-band spectrum release - published 24 August 2011.

³ Document 11/75, the Draft Information Memorandum and associated materials were prepared, in the main, while ComReg was awaiting the responses and submissions of Interested Parties to Document 11/60. Clearly, ComReg's full consideration of these responses and submissions in this document, as well as its final evaluation of the matters at issue, may result in appropriate changes to the draft Information Memorandum (11/75) and its associated materials.

⁴ Document 12/25 – Response to Consultation and Decision on the Multi-band Spectrum Release – published 16 March 2012.

- Document 12/21 – Publication of non-confidential submissions to Document 11/75 and correspondence provided by respondents (and ComReg written responses to same) - Published 16 March 2012; and
 - Document 11/102 – Publication of non-confidential responses to ComReg Document 11/60 and recent correspondence - Published 22 December 2011.
- 1.5 All public documents related to this process are also referenced on a dedicated webpage: <http://www.comreg.ie/gsmllib>.
- 1.6 Five interested parties submitted a response to Document 11/75. These were:
- Vodafone (including McCann Fitzgerald, Solicitors, acting for Vodafone);
 - Telefónica Ireland (O2);
 - eircom Group (eircom/Meteor);
 - Hutchison 3G Ireland Limited (H3GI); and
 - RTÉ and RTÉNL (RTÉ).
- 1.7 ComReg also received multiple submissions on Document 11/75 and on the Award Process generally outside the response periods originally stipulated by ComReg, which have served to delay this response to consultation. These were received from:
- Vodafone;
 - Telefónica Ireland (O2);
 - eircom Group (eircom/Meteor);
 - Hutchison 3G Ireland Limited (H3GI); and
 - IBEC.
- 1.8 ComReg has given careful consideration to all the material submitted by interested parties as well as to other available information before it. All discussions concerning this Award Process included in previous documents or in response to previous documents should be regarded as having been considered in full in the preparation of this response to consultation and the associated documents.
- 1.9 While ComReg has formed its own views in arriving at its final positions as set out in this document, ComReg points out that it has carefully considered and

had regard to the expert external advice provided to it in the course of this process.

1.10 Throughout this consultation process, ComReg has been guided by its statutory functions, objectives and duties relevant to the management of Ireland's radio frequency spectrum (which are set out in Annex 2 of Document 12/25) and the findings of its Regulatory Impact Assessment (which is set out in Chapter 3 of Document 12/25 and Annex 4 of Document 12/25A).

1.11 This document is structured as follows⁵:

- Chapter 2: considers submissions made by interested parties on the details of the spectrum bands to be included in the Award Process, the licence terms and conditions and associated matters, and sets out ComReg's final position on same;
- Chapter 3: considers submissions made by interested parties on the Award Process including an indicative timeline and sets out ComReg's final position on same;
- Chapter 4: considers submissions made by interested parties on the Auction Rules and sets out ComReg's final position on same;
- Chapter 5: considers submissions made by interested parties on the legal terms and conditions associated with the Award Process and sets out ComReg's final position on same; and
- Chapter 6: considers submissions made by interested parties on other issues and sets out ComReg's final position on same; and
- Chapter 7: sets out ComReg's view on relevant next steps in relation to this Award Process.

1.12 Readers might also note that:

⁵ Eight Annexes were included in Document 11/75 , namely:

1. Glossary and definitions;
2. The Draft Regulations;
3. Draft Part 4 to a Liberalised use Licence;
4. Rebate Methodology applicable to GSM Licensees;
5. Lot Application form;
6. Administrative forms;
7. Worked example of activity rules for Primary Rounds and caps on Supplementary Bids; and
8. Determination of Winning Bids and Base Prices;

- DotEcon's views and recommendations, as they relate to and address respondent's views, are set out in Document 12/51 issued alongside this Response to Consultation; and
- DotEcon's statement on the Fifth Benchmarking Report (Document 12/23) is set out in Annex A of Document 12/51.

1.13 For the avoidance of doubt, throughout this document ComReg refers to Hutchison 3G Ireland as 'H3GI', eircom or Meteor Mobile Communications Ltd as either 'eircom Group', 'eircom', 'Meteor' or 'eircom/Meteor', Telefónica O2 Communications (Ireland) Ltd as 'O2', 'Telefónica', 'Telefónica Ireland' or 'Telefónica O2' and Vodafone Ireland Limited as 'Vodafone'.

Chapter 2

2 The Spectrum Bands and Licences

2.1 Chapter 2 of Document 11/75 (the Draft Information Memorandum) set out ComReg's then views on:

- The spectrum bands in the award process;
- Liberalised Use Licence – Terms and Conditions;
- Preparatory Licence – Terms and Conditions; and
- Associated processes in the award process.

2.2 Responses on the above issues were, for the most part, summarised, considered and decided upon in Document 12/25 and this is noted as appropriate below.

2.1 The Spectrum Bands in the Award Process

2.1.1 ComReg's Position in Document 11/75

2.3 Section 2.1 of Document 11/75 detailed ComReg's proposals on the spectrum bands to be included in the Award Process, namely the 800 MHz, the 900 MHz and the 1800 MHz spectrum bands.

2.4 ComReg noted that this spectrum would be made available in 5 MHz paired blocks (or "Lots") of spectrum and that there were two types of Lots in the Award Process, namely:

- Generic Lots which are available to all Bidders; and
- Party-specific Lots which are only available to specific Bidders under the Early Liberalisation Option.

2.1.2 Views of Respondents on Document 11/75

2.5 In their responses to Document 11/75, three respondents, eircom group, Telefónica and Vodafone, provided comments on the spectrum bands to be included in the Award Process. These views are summarised in section 3.2.1 of Document 12/25 and primarily relate to the proposed inclusion of the 1800 MHz band and the exclusion of the 2.6 GHz band.

2.1.3 ComReg's Position in Document 12/25

2.6 Chapter 3 of Document 12/25 and Annex 4 of Document 12/25A considered respondents' views on the spectrum to be included in the Award Process. As set out in those documents, and particularly Chapter 8 of Document 12/25 (Decision D04/12), ComReg decided that the 800 MHz, the 900 MHz and the 1800 MHz spectrum bands would be included in the Award Process.

2.1.4 ComReg's Final Position on the Information Memorandum

2.7 In line with Document 12/25 and Decision 04/12, the Information Memorandum details the Award Process for liberalised rights of use in respect of spectrum in the 800 MHz, the 900 MHz and the 1800 MHz spectrum bands.

2.2 Liberalised Use Licences – Terms and Conditions

2.8 The proposed terms and conditions associated with a Liberalised Use Licence were detailed in the draft Regulations and the indicative Liberalised Use licence as set out in Annex 2 and Annex 3 respectively of Document 11/75, and were discussed in section 2.2 of Document 11/75. The following discusses each of the principal terms and conditions in turn.

2.2.1 Scope of the Liberalised Use Licence

2.2.1.1 ComReg's position in Document 11/75

2.9 The proposed scope of a Liberalised Use Licence was discussed in section 2.2.1 of Document 11/75 and detailed in the draft Regulations and the indicative Liberalised Use licence as set out in Annex 2 and Annex 3 respectively of Document 11/75. Amongst other things, ComReg noted:

- that a Liberalised Use Licence “is a non-exclusive Licence for the national terrestrial territory of the Republic of Ireland”; and
- at footnote 16 of Document 11/75 that “non-exclusive in the present context means that ComReg retains the right to authorise other Wireless Telegraphy apparatus in these spectrum bands which do not cause unacceptable interference to the Licensee.”

2.2.1.2 Views of Respondents on Document 11/75

2.10 Three respondents, eircom Group, Telefónica and Vodafone provided comments on the scope of the Liberalised Use Licence, and in particular these respondents

sought clarity on ComReg's statement on the non-exclusive nature of a Liberalised Use Licence. The views of these respondents were set out in section 5.8.1.2 of Document 12/25.

2.2.1.3 ComReg's position in Document 12/25

2.11 Section 5.8.1.3 of Document 12/25 considered the respondents' views and set out ComReg's final position on this. Among other things, ComReg decided that:

- *“it is appropriate, particularly in the context of promoting regulatory certainty, that the final Information Memorandum suitably informs prospective bidders about the non-exclusive nature of Liberalised Use Licences, and in this regard, it should be noted that ComReg does not presently foresee any material change in its policy on non-exclusivity over and above that already applied in other licensing regimes.”* and
- the phrase *‘on a non-interference and non-protected basis’* would be defined in the final Information Memorandum and the final Regulations (Annex 7 of Document 12/25A presented the amended draft Regulations in this regard) clarifying that:
 - *“Non-exclusive”, in relation to a Licence, means that the Commission is not precluded from authorising the keeping and possession by other persons of other apparatus for wireless telegraphy on a Non-Interference and Non-Protected Basis in one or more of the 800 MHz, the 900 MHz and the 1800 MHz bands; and*
 - *“Non-Interference and Non-Protected Basis” means a basis on which no harmful interference may be caused to any Radiocommunication Service, and on which no claim may be made for the protection of apparatus operating on this basis against harmful interference originating from Radiocommunication Services.”*

2.12 In line with ComReg's position above, the draft Regulations in Annex 7 of Document 12/25A included text clarifying the non-exclusive nature of a Liberalised Use licence.

2.2.1.4 ComReg's final position on the Information Memorandum

2.13 In line with ComReg's position as set out in Document 12/25, the final Information Memorandum includes text on the non-exclusive nature of a Liberalised Use licence and defines the phrase 'on a non-interference and non-protected basis'.

2.14 In light of the above, no material changes are required to the draft Regulations as set out in Annex 7 of Document 12/25A.

2.2.2 Liberalised Use Licence Duration and Renewal

2.2.2.1 ComReg's position in Document 11/75

2.15 The proposed duration and annual renewal of a Liberalised Use licence were discussed in section 2.2.2 of Document 11/75, and were detailed in Regulation 5 of the draft Regulations as set out in Annex 2 of Document 11/75.

2.16 Among other things, ComReg noted that:

- the duration of a Liberalised Use Licence would be defined by reference to the Lots won in Time Slice 1 and/or Time Slice 2 and that the expected commencement and expiry dates of these Lots would be the dates as set out in Table 1 below;

	Commencement Date	Expiry Date
Time Slice 1	1 February 2013	12 July 2015
Time Slice 2	13 July 2015	12 July 2030

Table 1: Commencement and expiry dates of Time Slice 1 and Time Slice 2

- circumstances outside ComReg's control could lead to ComReg being unable to make any or all Lots in the 800 MHz, the 900 MHz and/or the 1800 MHz bands available for Liberalised Use by the commencement date of Time Slice 1 and/or Time Slice 2 identified above; and
- a Liberalised Use licence, once granted, would be subject to a series of annual renewals of 1 year duration up until one year prior to the expiry date of the Liberalised Use licence.

2.2.2.2 Views of Respondents on Document 11/75

2.17 Four respondents, eircom Group, H3GI, Telefónica and Vodafone provided comments related to the duration and annual renewal of a Liberalised Use Licence.

2.18 Two of these respondents, H3GI and Telefónica, commented on the duration of a Liberalised Use Licence.

- H3GI stated that it is of the view that ComReg should issue licences with an indefinite duration. This view was set out in section 4.4.3 and section 4.4.4 of Document 12/25.⁶
- Telefónica asserted that, as the end of a licence term approaches, an investment gap naturally emerges. It is of the view that the optimum means to remove this gap is to issue indefinite licences, and “at a minimum the regulations should provide that the re-assignment process will be completed at least five years before the end of the licence term.”⁷

2.19 H3GI and Telefónica also commented on the possibility of the delayed commencement of a Liberalised Use Licence and the uncertainty this brings to the process. These views were set out in section 4.4.3 and section 6.2.3.1 of Document 12/25.

2.20 All four respondents, eircom Group, H3GI, Telefónica and Vodafone, commented upon the annual renewal process within the duration of a licence. These views were set out in section 5.8.2.2 of Document 12/25.

2.2.2.3 ComReg’s position in Document 12/25

The duration of a Liberalised Use Licence and the possibility of delayed commencement

2.21 The duration of a Liberalised Use Licence was discussed in section 4.4. of Document 12/25, and amongst other things, ComReg set out its position that:

- Liberalised Use Licences should not be issued with an indefinite duration (see Section 4.4.6.1 of Document 12/25);
- the award of spectrum in two Time Slices is the most appropriate mechanism for the particular circumstances of this Award Process (see section 4.4.6.3 and section 4.4.6.4 of Document 12/25); and

⁶ H3GI reiterated this view in its letter of 5 April 2012 where it stated that “*For the reasons set out in previous submissions and the NERA report provided by H3GI to Com Reg in October 2011, H3GI believes that Com Reg should issue indefinite licences in the upcoming 800, 900 and 1800 MHz auction.*” Both H3GI’s letter and ComReg’s response to same (noting that this issue has already been considered and decided upon in Document 12/25) have been published in Document 12/49.

⁷ See paragraphs 2.10 and 3.13 of Telefonica’s submission on Document 11/75.

- ComReg cannot provide complete certainty on the commencement date of Liberalised Use licences in Time Slice 1 and Time Slice 2 in advance of knowing the outcome of the auction. Given this, it would be remiss of ComReg not to put in place mechanisms to address the scenario where any delays arise (see paragraph 4.116 of Document 12/25).

2.22 In Chapter 6 of Document 12/25, ComReg considered the transition issues that may arise in the spectrum bands in the Award Process, and among other things:

- stated that it was satisfied that the commencement date of Liberalised Use Licences of 1 February 2013 provides sufficient time for existing operators to carry out the necessary relocation activities, assuming the Auction process does not experience any unexpected delays (see paragraphs 6.58 to 6.65 of Document 12/25); and
- noted that, while a retuning scenario for Vodafone or Telefónica in the 900 MHz band could affect the commencement date of up to 3 spectrum blocks in the 900 MHz band in Time Slice 1, it *“has no reason to believe that this is likely to occur and, in any case, believes that the auction has been designed to minimise the negative effects of such an outcome, should it arise”* (see paragraphs 6.71 to 6.77 of Document 12/25)

2.23 Chapter 8 of Document 12/25 (Decision 04/12) set out ComReg’s decisions on the Award Process, including ComReg’s decisions on the duration of a Liberalised Use licence and the possibility of delayed commencement, and stated that:

“3.4.3. rights of use of spectrum in the 800 MHz, 900 MHz and the 1800 MHz bands being granted in two “Time Slices”, viz.:

3.4.3.1 Time Slice 1: From 1 February 2013 (or such other date as may be specified by ComReg) to 12 July 2015 (or such other date as may be specified by ComReg); and

3.4.3.2 Time Slice 2: From 13 July 2015 (or such other date as may be specified by ComReg) to 12 July 2030,

and where all rights of use of spectrum granted shall expired absolutely on 12 July 2030.” (c.f. Decision 3.4.3 of Decision 04/12)

2.24 In line with ComReg’s final position above, Regulation 5(2) of the draft Regulations as set out in Annex 7 of Document 12/25A specified the commencement and expiry dates of a Liberalised Use licence in Time Slice 1 and Time Slice 2.

Renewals within the duration of a Liberalised Use Licence

- 2.25 The annual renewal process within the duration of a Liberalised Use licence was discussed in Section 5.8.2.3 of Document 12/25, and ComReg accepted that *“it is more appropriate to issue a Liberalised Use Licence for the duration of the licence (i.e. with no licence renewals)”*
- 2.26 In line with ComReg’s position above, the draft Regulations as set out in Annex 7 of Document 12/25A were adjusted accordingly.

2.2.2.4 ComReg’s final position on the Information Memorandum

- 2.27 With the exception of Telefónica’s comment regarding the investment gap that could emerge at the end of a licence term and its suggestion that the final Regulations include a provision which would require the spectrum re-assignment process to be completed at least five years before the end of the licence term, ComReg notes that all of the respondent’s views on this issue were considered in Document 12/25.
- 2.28 In relation to Telefónica’s comment on an ‘investment gap’, ComReg notes that arguments regarding the likely economic incentives of incumbent operators facing the periodic re-release of spectrum were considered in Document 11/88,⁸ and among other things, ComReg observed that *“empirical evidence for decreasing investment in mobile networks as licence expiry approaches is ambiguous.”*
- 2.29 Telefónica suggests that the final Regulations should require the spectrum re-assignment process to be completed at least five years before the end of the licence term (i.e. on or before 12 July 2025). ComReg believes that it would be inappropriate to make such a decision at this time, as information relevant to the use of the relevant spectrum bands post-2030 and the appropriate spectrum re-assignment process may only become available closer to the Licence expiry date. For example, in this spectrum Award Process, information on the availability of the 800 MHz band only became known in 2010.⁹ If ComReg had been required to carry out a spectrum re-assignment process 5 years in advance of expiry of licences in the 900 MHz bands (i.e. in 2006), it would not have been possible for ComReg to include the 800 MHz band with the 900 MHz band in this Award

⁸ See section 3.4.2 (page 18 and 19) of Document 11/88 for further detail.

⁹ See Document 10/59 “Update on the Availability of Ireland’s “Digital Dividend” and the 900 MHz Band Liberalisation Consultation Process” http://www.comreg.ie/_fileupload/publications/ComReg1059.pdf

Process, despite the obvious benefits that a multi-band award process will provide.¹⁰

2.30 ComReg recognises, however, that the timely provision of information on the use of a spectrum band is important and paragraph 2.32 of Document 11/75 set out ComReg's proposal that:

- *“Significantly prior to the expiry of Liberalised Use Licences at the end of Time Slice 2, ComReg intends to review the future use of the Bands with a view to identifying the appropriate process for dealing with the spectrum released by the above Licence expirations.”*

2.31 ComReg believes that this approach strikes the appropriate balance between providing information to stakeholders in a timely fashion while also allowing ComReg to take all relevant factors into account when considering the future use of these spectrum bands, including the particulars of the re-assignment process.

2.32 Given the above, and in line with ComReg's position as set out in Document 12/25, the text of the final Information Memorandum:

- does not provide for an annual renewal process within the duration of a Liberalised Use Licence (in line with section 5.8.2.3 of Document 12/25);
- maintains that the duration of a Liberalised Use Licence will be determined with reference to the commencement and expiry dates of Time Slice 1 and Time Slice 2 (as detailed in Decision 3.4.3 of Decision 04/12); and
- maintains that there is a potential for delayed commencement of Liberalised Use Licences in Time Slice 1 and/or Time Slice 2 (in line with paragraph 4.116 of Document 12/25).

2.33 In light of the above, no material changes are required to the draft Regulations as set out in Annex 7 of Document 12/25A.

2.2.3 Licence Conditions Applicable to all Liberalised Use Licences

2.2.3.1 ComReg's position in Document 11/75

2.34 Section 2.2.3 of Document 11/75 set out ComReg's then view on the principal licence conditions associated with a Liberalised Use licence, namely:

¹⁰ See chapter 3 of Document 12/25, Annex 4 of Document 12/25A and Chapter 2 of Document 12/23 in this regard.

- coverage and roll-out obligations and associated performance guarantee;
- Quality of Service (“QoS”) obligations and its associated performance guarantee;
- notification to ComReg of the termination of the use of a technology;
- compliance with rules to prevent spectrum hoarding; and
- assignment of rights and obligations of a Liberalised Use licence.

2.35 In addition, these licence conditions were detailed in Regulation 6 of the draft Regulations (Annex 2 of Document 11/75) and in the indicative Liberalised Use Licence (Annex 3 of Document 11/75).

2.2.3.2 Views of Respondents on Document 11/75

2.36 Four respondents, eircom Group, H3GI, Telefónica and Vodafone provided comments related to the licence conditions applicable to a Liberalised Use licence.

Coverage and Roll-out obligations and associated performance guarantee

2.37 One respondent, Vodafone, commented on the coverage measurement metrics. This view was set out in section 5.5.3.1 of Document 12/25.

2.38 Three respondents, eircom Group, H3GI and Vodafone, provided comments on the provision of performance guarantees in respect of the coverage and roll-out conditions. These views were detailed in section 5.5.3.2 of Document 12/25.

2.39 One respondent, eircom Group, provided comments on the reporting on compliance conditions. This view was set out in section 5.5.3.2 of Document 12/25.

Quality of Service (“QoS”) obligations and its associated performance guarantee

2.40 Two respondents, H3GI and Vodafone, commented upon the condition that QoS obligations would apply to all relevant services of the licensee and those relevant services provided by any third party/s via contractual or other arrangements. These views were set out in section 5.6.2.3 of Document 12/25. In addition, in its letter of 11 April 2012, Vodafone noted ComReg’s position as set out in paragraph 5.242 of Document 12/25 and stated that it “*believes that ComReg must revise its current position and include clear provisions in licence terms that*

do not expose licensees to liability for licence breaches by hosted MVNOs where these are caused by factors in the control of the latter.”¹¹

- 2.41 Three respondents, eircom Group, H3GI and Vodafone provided comments on the provision of performance guarantees in respect of the QoS conditions attached to a Liberalised Use Licence. These views were set out in section 5.6.5.3 of Document 12/25.¹²
- 2.42 One respondent, eircom Group, provided comments on the reporting on compliance conditions. This view was set out in section 5.6.5.3 of Document 12/25.¹³

Notification to ComReg on the termination of the use of a technology

- 2.43 Three respondents, H3GI, eircom Group and Vodafone, provided comments on obligation to notify the termination of technology to ComReg at least 6 months in advance. These views were set out in section 5.2.3 of Document 12/25.

Compliance with rules to prevent spectrum hoarding

- 2.44 One respondent, Telefónica, commented on the obligation to comply with any rules laid down by ComReg in respect of spectrum hoarding. This view was set out in section 5.9.1 of Document 12/25.

Assignment of rights and obligations of a Liberalised Use Licence

- 2.45 Three respondents, H3GI, Telefónica and Vodafone, provided comments on ComReg's position in Document 11/75 regarding the assignment of rights and obligations of a Liberalised Use Licence and the draft Regulations. These views were set out in section 5.8.3.2 (paragraph 5.321) and section 5.9.1 (paragraph 5.357) of Document 12/25

2.2.3.3 ComReg's position in Document 12/25

Coverage and Roll-out obligations and associated performance guarantee

¹¹ Both Vodafone's letter and ComReg's response to same (noting that this issue has already been fully considered and decided upon in Document 12/25) have been published in Document 12/49.

¹² As noted in paragraph 5.276 of Document 12/25, these views were the same as those set out in paragraph 5.201 to 5.205 of Document 12/25 where the performance guarantee condition is discussed in relation to the coverage and roll-out obligation.

¹³ As noted in paragraph 5.277 of Document 12/25, this view is the same as that set out in paragraphs 5.206 to 5.207 of Document 12/25, where the reporting on compliance conditions is discussed in relation to the coverage and roll-out obligation.

2.46 Section 5.5 of Document 12/25 considered the respondents' views on the proposed coverage and roll-out obligations and sets out ComReg's final position on this matter. Among other things:

- Section 5.5.3.1 of Document 12/25 sets out ComReg's final position regarding the coverage measurement metrics;
- Section 5.5.3.2 of Document 12/25 sets out ComReg's final position regarding the performance guarantees in respect of the coverage and roll-out conditions. Among other things, ComReg decided that "*it has decided not to further consider attaching performance guarantees obligations in respect of the coverage and roll-out obligations associated with a Liberalised Use Licence*"; and
- Section 5.5.3.2 of Document 12/25 sets out ComReg's final position regarding the reporting on compliance conditions associated with the coverage and roll-out obligation. Among other things, ComReg decided that "*it would be reasonable to carry out compliance assessments on an annual basis instead of on a six monthly basis*".

2.47 Section 3 of the indicative Liberalised Use licence in Annex 8 of Document 12/25A set out the provisions for implementing the roll-out and coverage requirements in the Liberalised Use licensing regime. These provisions were in line with ComReg's final position as set out in Document 12/25.

Quality of Service ("QoS") obligations and its associated performance guarantee

2.48 Section 5.6 of Document 12/25 considered the respondents' views on the proposed QoS obligations and sets out ComReg's final position on this matter. Among other things;

- Section 5.6.2.4 of Document 12/25 sets out ComReg's final position that the QoS obligations also apply to all third parties on a Licensee's network. Among other things, ComReg decided that "*it remains of the view that Licensees should be obliged to ensure that all relevant services provided using the Spectrum Blocks licensed in Part 1 of its Licence comply with the QoS conditions.*"
- Section 5.6.5.4 of Document 12/25 sets out ComReg's final position regarding the performance guarantees in respect of the QoS conditions. Among other things, ComReg decided that "*it is not appropriate to further*

consider attaching performance guarantees obligations in respect of the QoS obligations associated with a Liberalised Use Licence”; and

- Section 5.6.5.4 of Document 12/25 (sets out ComReg’s final position regarding the reporting on compliance conditions associated with the QoS obligations. Among other things, ComReg decided that “*compliance assessment for QoS obligations is to be carried out on an annual basis rather than a six monthly basis.*”

2.49 Section 4 of the indicative Liberalised Use licence in Annex 8 of Document 12/25A set out the provisions for implementing the Quality of Service obligations in the Liberalised Use licensing regime. These provisions were in line with ComReg’s final position as set out in Document 12/25.

Notification to ComReg: Termination of the use of a technology

2.50 Section 5.2.4 of Document 12/25 considered respondents’ views on the proposed obligation to notify the termination of a technology six months in advance of its proposed termination date and set out ComReg’s final position on this matter. Among other things, ComReg decided that:

- “*it is maintaining a 6 month notification obligation in the Liberalised Licence in relation to cessation of a technology. However ComReg has amended Regulation 6(12)(b) to be in line with the provision set out in Condition 18 of the GA [General Authorisation], namely that a licensee uses reasonable endeavours at all times to ensure that the effect on consumers of a cessation of use of a terrestrial system is minimised.*”

2.51 The provisions for implementing the above final position into the Liberalised Use licensing regime were set out in Regulation 6(12)(a) and 6(12)(b) of the draft Regulations in Annex 7 of Document 12/25A.

Compliance with rules to prevent spectrum hoarding

2.52 Section 5.9.2 of Document 12/25 considered respondents’ views on the proposed inclusion of a spectrum hoarding condition in the Liberalised Use licence and set out ComReg’s final position that it is appropriate to maintain this obligation.

2.53 The provisions for implementing the above final position into the Liberalised Use licensing regime were set out in Regulation 6(6) of the draft Regulations in Annex 7 of Document 12/25A.

Assignment of rights and obligations of a Liberalised Use Licence

2.54 Section 5.8.3.3 and section 5.9.2 of Document 12/25 considered respondents' views on the assignment of rights and obligations of a Liberalised Use licence and set out ComReg's final position on this matter. Among other things, ComReg decided that:

- *“it is not required to finalise the procedures relating to the assignment of rights and obligations of a Wireless Telegraphy licence together with the publication of the final Information Memorandum. These are two separate issues subject to their own consultation processes”;*
- *“no changes are required to the text of the Information Memorandum (i.e. paragraphs 2.43 and 2.44 of Document 11/75).”;* and
- *“it is appropriate to amend the Regulations to provide for the possibility of the transfer or lease of spectrum rights of use attaching to a Liberalised Use Licence prior to the finalisation of ComReg procedures, subject to the approval of ComReg which shall not be unreasonably withheld”.*

2.55 The provisions for implementing the above final position in the Liberalised Use licensing regime were set out in Regulations 6(15), 6(16) and 6(B) and Regulation 7 of the draft Regulations in Annex 7 of Document 12/25A.

2.2.3.4 ComReg's final position on the Information Memorandum

2.56 ComReg notes that all of the respondent's views on this matter have been considered in Document 12/25. In line with ComReg's final position as set out in Document 12/25, the text of the final Information Memorandum, among other things:

- does not set out performance guarantee conditions to be associated with the coverage and roll-out obligation and the QoS obligation;
- brings the reporting on compliance conditions for the coverage and roll-out obligations in line with section 5.5.3.2 of Document 12/25;
- brings the reporting on compliance conditions for the QoS obligations in line with ComReg's position in section 5.6.5.4 of Document 12/25 ;
- brings the termination of the use of a terrestrial system (i.e. a technology) condition in line with ComReg's position as set out in section 5.2.4 of Document 12/25;

- maintains the conditions in relation to spectrum hoarding and the assignment of rights and obligations of a Liberalised Use licence; and
- describes the conditions to provide updated licensing information and to pay the SUFs on an annual basis before the anniversary of the licence commencement date.¹⁴

2.57 In light of the above, no material changes are required to draft Regulations and indicative Liberalised Use licence schedule as set out in Annex 7 and Annex 8 of Document 12/25A.

2.2.4 Liberalised Use Licence Technical Conditions

2.2.4.1 ComReg's position in Document 11/75

2.58 Section 2.2.4 of Document 11/75 set out ComReg's view on the technical licence conditions associated with a Liberalised Use Licence, namely conditions related to:

- spectrum in the 800 MHz band;
- spectrum in the 900 MHz and 1800 MHz bands;
- the R&TTE Directive;
- the EMC Directive as transposed into Irish law.

2.59 In addition, these technical licence conditions were detailed in Regulation 6 of the draft Regulations (Annex 2 of Document 11/75) and the indicative Liberalised Use Licence (Annex 3 of Document 11/75).

2.2.4.2 Views of Respondents

2.60 One respondent, RTE, commented on the technical licence conditions related to the 800 MHz band. This view was summarised in Annex 9.2 of Document 12/25A. No other respondents commented upon the technical licence conditions in their responses to Document 11/75.

¹⁴ Note, in Document 11/75 this condition was included in the annual renewal process as set out in section 2.2.2.

2.2.4.3 ComReg's position in Document 12/25

- 2.61 Annex 9 of Document 12/25A considered the views of respondents in relation to the co-existence of ECS services in the 800 MHz band with the broadcasting service in the 900 MHz band and set out ComReg's final position on this matter.
- 2.62 Other aspects of the technical conditions to be associated with a Liberalised Use licence were considered in sections 5.2, 5.3, 5.4 and 5.10 of Document 12/25, and ComReg's final position on these matters is set out in those sections. Among other things, ComReg noted that the International Memorandum of Understanding (MoU) on the 800 MHz band has now been agreed between ComReg and Ofcom (see Annex 14 to Document 12/25).
- 2.63 Regulation 6 of the draft Regulations in Annex 7 of Document 12/25A, and sections 1 and 2 of the indicative Liberalised Use licence in Annex 8 of Document 12/25A set out the provisions for implementing the technical conditions in the Liberalised Use licensing regime. These provisions were in line with ComReg's final position as set out in Document 12/25.

2.2.4.4 ComReg's final position in the final Information Memorandum

- 2.64 ComReg notes that all of the respondents' views on this matter have been considered in Document 12/25. In line with ComReg's position as set out in Document 12/25, the text of the final Information Memorandum, among other things:
- includes updated text on the measures necessary to facilitate the co-existence of ECS services in the 800 MHz band with the broadcasting band below 790 MHz; and
 - includes a reference to the recently agreed MoU on the 800 MHz band as published in Document 12/47.¹⁵
- 2.65 No material changes are required to the draft Regulations and indicative Liberalised Use licence schedule as set out in Annex 7 and Annex 8 of Document 12/25A.

¹⁵ http://www.comreg.ie/_fileupload/publications/ComReg1247.pdf

2.2.5 Fees for a Liberalised Use Licence

2.2.5.1 ComReg's position in Document 11/75

2.66 Section 2.2.5 of Document 11/75 set out ComReg's then position on the fees for a Liberalised Use licence, namely

- the upfront fee
- the Spectrum Usage Fee ("SUF")
- rebates against Liberalised Use licence fees; and
- payment arrangements for licence fees

2.67 In addition, the fees for a Liberalised Use licence were detailed in Regulation 8 of the draft Regulations (Annex 2 of Document 11/75) and the rebate methodology applicable to GSM licensees was detailed in Annex 4 of Document 11/75.

2.2.5.2 Views of Respondents

2.68 Aside from the 'general' fees issues as discussed in Chapter 6 of this document, two respondents, H3GI and Telefónica, commented on the fees associated with a Liberalised Use licence and the applicable rebates.

2.69 In relation to the proposed fees for a Liberalised Use licence, Telefónica

- reiterated its disagreement with ComReg's proposal to link the SUF with the Consumer Price Index (CPI) and noted ComReg's proposal that indexation would start from a common base date.¹⁶ Telefónica asserted that ComReg's proposal "*ignores the fact that operator valuations (and ComReg's derivation of the NPV of the minimum price) would be modelled from either commencement of service, or licence grant at the earliest. There is a risk of substantial delay between the final decision and the grant of licences, e.g. in the case of legal challenge. Such delay in turn delays service commencement and it would be wrong to impose [sic] a cost on operators in this case.*"; and
- sought clarity from ComReg that "*if a licence is terminated mid-term, for whatever reason, that there will be no requirement to pay future SUFs, e.g. to 2030.*"

¹⁶ In Document 11/75, footnote 39 stated that "*This is likely to be the date that ComReg publishes its Final Decision on the Multi-band Spectrum Release*".

- 2.70 Both H3GI and Telefónica commented on the proposed rebates applicable as detailed in Annex 4 of Document 11/75.
- 2.71 Telefónica noted that it may be necessary for an existing GSM licensee to undertake re-tuning as a result of the assignment stage and in such circumstances it asserted that a licensee must be appropriately compensated. It stated that “*ComReg has an obligation to act reasonably, proportionately, and in a manner that causes least disruption to licensees*” and it reiterated its view (as submitted in its response to Document 11/60) that ComReg’s proposal was not adequate in all circumstances.
- 2.72 H3GI noted ComReg’s proposed rebate methodology and it welcomed ComReg’s intention to publish on its website all relocation cost information and ‘relocation’ rebates determined. In addition, H3GI:
- stressed “*the need for ComReg to adopt a rigorous approach to verification of alleged additional relocation costs incurred by a GSM Licensee.*”; and
 - noted “*that ComReg will not provide a rebate to a Licensee in the scenario where it is required to relocate its spectrum assignments between Time Slice 1 and Time Slice 2, and would welcome the same.*”

2.2.5.3 ComReg’s position in Document 12/25

- 2.73 Section 4.8 of Document 12/25 and Annex 10 of Document 12/25A set out ComReg’s final position on the spectrum fees to be associated with a Liberalised Use Licence which provided, amongst other things that SUFs would be indexed using the Consumer Price index.
- 2.74 ComReg’s decision on SUFs was set out in Chapter 8 of Document 12/25 (Decision D04/12) in the following terms::
- “*minimum prices to be determined in accordance with the methodology set out in the Benchmarking Report prepared by DotEcon, and reserve prices and spectrum-usage fees (SUFs) for the Liberalised Use licences described herein, to be determined in accordance with the methodology set out in Chapter 4.8 hereof, and with the Issues Report prepared by DotEcon and which accompanies ComReg Document 12/25, where the*

final prices will be set out in the Information Memorandum, taking account of any additional relevant data at that time.”¹⁷

2.75 In relation to the applicable rebates:

- Section 4.5 of Document 12/25 set out ComReg’s final position on the rebates applicable to licensees for ‘relocation’ costs. In paragraph 4.167, ComReg noted that such rebates would apply in the following circumstances;
 - *“where an Existing GSM Licensee does not avail of early liberalisation in the first Time Slice and does not win spectrum in the second Time Slice;*
 - *where an existing GSM licensee does not avail of early liberalisation in the first Time Slice and wins spectrum in the second Time Slice. In this circumstance, ComReg will only compensate the licensee for those aspects of the costs, which result from it having to relocate earlier than would otherwise be necessary (but not for relocation costs themselves); and*
 - *in other similar scenarios if a licensee can reasonably prove to ComReg that it has directly incurred “relocation” costs as a result of the Full Assignment Round that it would not have otherwise incurred at some point in time.”*
- Section 4.7 of Document 12/25 set out ComReg’s final position on the rebates applicable to licensees where the ‘early liberalisation option’ is exercised, and paragraphs 4.221 stated that *“the rebates for early liberalisation will be based on the methodology set out in DotEcon’s Issues Report, which takes into account:*
 - *the original amount paid for the licence;*
 - *the original licence expiry date;*
 - *the proportion of the original licence which would be forgone;*
 - *the quantity of spectrum relinquished; and*
 - *the date at which the rebate is issued by ComReg.”*

¹⁷ Decision 3.4.16 of Decision 04/12.

2.76 ComReg's decision in relation to relocation costs for Existing GSM Licensees and rebates is set out in Chapter 8 of Document 12/25 (Decision D04/12) in the following terms:

- *“arising from the assignment round, the reimbursement to Existing GSM Licensees of objectively-justified costs associated with the relocation of such Existing GSM Licensees’ spectrum rights of use in Time Slice 1, or where such Existing GSM Licensees can otherwise reasonably demonstrate to ComReg that relocation costs have been incurred directly as a result of the assignment round, which would not otherwise have been incurred.”*¹⁸
- *“where an Existing GSM Licensee successfully avails of the Early Liberalisation Option, it will be entitled to a rebate in respect of the Existing GSM Licensee’s licence(s). The methodology for the calculation of the relevant rebate is more particularly described in Document 12/25 and will be further particularised in the Information Memorandum.”*¹⁹

2.77 The provisions for implementing the above decision in the Liberalised Use licensing regime were set out in Regulation 8 of the draft Regulations in Annex 7 of Document 12/25A.

2.2.5.4 ComReg’s final position on the Information Memorandum

2.78 Aside from the ‘general’ fee issues which are discussed in chapter 6 of this document, ComReg notes that respondents submitted comments on:

- the SUF, namely the indexing of SUF fees, the starting date for this indexation and the requirement, if any, to pay future SUFs if a licence is terminated mid-term; and
- the rebate process as set out in Annex 4 of Document 11/75.

2.79 Focussing firstly on SUFs, ComReg notes that the respondents’ views on the indexation of SUFs were considered in Annex 10 of Document 12/25A. As set out in that Annex, ComReg’s final position is to *“index SUFs using the Consumer Price Index”*.

2.80 By indexing the SUFs using the CPI, the SUF per time period and per lot may increase or decrease over time in line with changes to the CPI. In Document

¹⁸ Decision 3.4.15 of Decision 04/12.

¹⁹ Decision 3.4.12 of Decision 04/12.

11/75, ComReg proposed a common start date (or a common base date) for calculating the change in the value of the SUF due to the CPI (i.e. the CPI Adjustment) as among other things, having a common start date for calculating the relevant CPI adjustment ensures that the SUF per time period and per lot is the same for each Liberalised Use Licensee.

- 2.81 ComReg considered setting the start date for CPI adjustments to the commencement date of each Liberalised Use licence, but ComReg discounted this option as the commencement dates of Liberalised Use licences may differ and this could therefore lead to a situation where two Liberalised Use licensees would pay different SUFs for the same amount of spectrum in the same time period. To avoid this potential situation, ComReg remains of the view that it is appropriate to set a common start date for calculating the CPI adjustments to SUFs. The remaining question therefore is the start date for calculating this CPI adjustment.
- 2.82 In Document 11/75, ComReg suggested that the common start date *“is likely to be the date that ComReg publishes its Final Decision on the Multi-band Spectrum Release”*. However since publishing Document 11/75 and having considered Telefonica’s comments on this issue, ComReg is of the view that it would be more appropriate to set the common start date as 1 February 2013, i.e. the expected commencement date of a Liberalised Use licences in Time Slice 1 and the date which ComReg expects most Liberalised Use Licences to begin.
- 2.83 By setting the common start date of CPI indexation to 1 February 2013, the SUFs for the first year of a Liberalised Use Licence with a commencement date of 1 February 2013 would not require a CPI adjustment, i.e. the SUFs for this time period would be €1.08 million for each Spectrum Block in the 800 MHz band or the 900 MHz band, and €0.54 million for each Spectrum Block in the 1800 MHz band. CPI adjustments to the SUFs would apply for each subsequent time period.
- 2.84 ComReg is aware that Liberalised Use licences may commence on dates other than 1 February 2013, e.g. a licensee only obtains spectrum in Time Slice 2, or the commencement date of a liberalised use licence in Time Slice 1 is delayed²⁰ or brought forward under advanced commencement, etc.. However, as discussed above, ComReg believes that it would inappropriate to use the actual licence commencement date of such licences as the start date of CPI adjustments, as this could lead to a situation where different SUFs are being paid by Liberalised Use Licensees.

²⁰ Section 2.2.6 of this document sets out ComReg’s position on refunds in relation to the delayed commencement of a Liberalised Use Licence.

- 2.85 The remaining matter raised in relation to the SUF was a comment from Telefónica seeking clarification on whether there would be a requirement to pay future SUFs if a licence is terminated early. In this regard, it is ComReg's view that, while the Licensee would be required to pay all SUFs which fell due for payment up to the date of the Licence termination, assuming that this licence was not terminated as a result of the licence compliance breach, the Licensee would not be required to pay future SUFs beyond this date. ComReg notes that Document 11/75 was silent on this matter and text has been included in the Information Memorandum to clarify this point.
- 2.86 The remaining respondents' views submitted in this section related to the rebate mechanism and methodology as set out in Annex 4 of Document 11/75. In relation to these comments:
- ComReg notes that Telefónica's view on the circumstances where relocation costs may be appropriate was considered in section 4.5.6 of Document 12/25 and, in response to this view, ComReg stated its view that it would also offer "*compensation to an incumbent for other scenarios if it could demonstrate to ComReg's satisfaction that it has incurred relocation costs directly as a result of the Assignment Stage that it would not have otherwise incurred at some point in time.*" (c.f. paragraph 4.158 of Document 12/25). ComReg will update the text of the Information Memorandum to reflect this position;
 - ComReg notes that H3GI's views²¹ were also considered in section 4.5 of Document 12/25, and, as set out in Decision 3.4.15 of Decision 04/12 (i.e. chapter 8 of Document 12/25), only objectively-justified costs associated with the relocation of existing GSM licensees will be reimbursed by ComReg. ComReg has updated the text of the Information Memorandum to reflect this position.
- 2.87 Given the above, and ComReg's decision as set out in Document 12/25, the Information Memorandum includes text that :
- sets out the reserve prices and the SUFs associated with spectrum blocks in the 800 MHz, 900 MHz and 1800 MHz bands. The reserve prices and SUFs are set out in light of DotEcon's fifth Benchmarking Report as DotEcon is of the view that no update to this report is warranted, as set out in Annex 2 of Dotecon's Issue Report (Document 12/51).

²¹ H3GI's views were noted in paragraph 4.132 of Document 12/25.

- sets 1 February 2013 as the common base date for calculating the CPI adjustment to a SUF;
- states that, where a Liberalised Use Licence is terminated early (and not a result of a licence compliance action), the Licensee is not obliged to pay SUFs falling due for payment after the termination date of the Liberalised Use licence; and
- states that the objectively-justified relocation costs may also be appropriate in “other scenarios”.

2.88 No material changes to the draft Regulations as set out in Annex 7 of Document 12/25A are required.

2.2.6 Refund of Licence Fees

2.2.6.1 ComReg’s position in Document 11/75

2.89 Section 2.2.6 of Document 11/75 set out ComReg’s then position on the refund of Licence fees in relation to:

- delayed commencement of Liberalised Use Licences in Time Slice 1 for Lots in the 800 MHz, 900 MHz and 1800 Mhz bands; and
- other refunds of Licence Fees.

2.90 In addition, the fees for a Liberalised Use licence were detailed in Regulation 8 of the draft Regulations (Annex 2 of Document 11/75).

2.2.6.2 Views of Respondents

2.91 Four respondents, eircom Group, H3GI, Telefónica and Vodafone, commented on the refund of fees as proposed in Document 11/75.

2.92 eircom Group agreed with ComReg’s proposal, namely that the relevant parties should be refunded the pro rata portion of the fees already paid where the commencement date of a Liberalised Use Licence is delayed. In addition, eircom Group noted that the draft Regulation is silent on the subject of refunds and it stated that this should be amended accordingly and provide for the application of the refund scheme for delayed commencement.

- 2.93 Vodafone asserted that the text of paragraph 2.76 should be amended to make it clear that both the pro-rata portion of the Upfront fee and the SUF would be refunded in the event of delayed commencement.
- 2.94 H3GI welcomed the principle that pro-rata refunds of spectrum fees should be payable in the event of delayed commencement, including any delayed commencement of the 800 MHz band. In addition, H3GI:
- proposed that the text of Regulation 8 should be amended to reflect refunds. This view was noted in paragraph 5.359 of Document 12/25;
 - noted that it considered that the language used in paragraph 2.75 et seq to be somewhat ambiguous and that it believed that *“there should be a firm commitment on ComReg’s part to refund fees to Winning Bidders who are non-GSM operators such as H3GI, where the delay in commencement is caused (and/or contributed to) by failure of the Existing GSM Licensees to carry out their transitional activities promptly (i.e. refunds “will” be paid, rather than “may” be payable)”*; and
 - stated that it *“is concerned that it is unclear to what extent ComReg might seek to rely on the circumstances set out in paragraph 2.78 of the Draft IM and in particular, the reference to a delay that is ‘contributed to’ by a winning bidder, in order to exclude liability towards a Winning Bidder who is a non-GSM operator such as H3GI, in the context of delayed transitional activities of the Existing GSM Licensees.”*
- 2.95 Telefónica stated that it did not believe that ComReg’s proposal to compensate Licensees in the event of delayed commencement, as set out in section 2.2.6 of the draft Information Memorandum, provides an adequate solution. It asserted that *“ComReg’s proposed compensation in the event of delayed availability fails to recognise that an operator who would choose a particular band in good faith would suffer losses that are significantly greater than the fee refunds proposed by ComReg in the event that the spectrum was not available on the due date. ComReg proposes that in entering the auction, bidders agree to limit any compensatory claim or liability of ComReg to a limited refund of spectrum fees. Telefónica believes this to be an unfair term and would need to reserve its rights in this regard.”*
- 2.96 One respondent, H3GI, submitted a comment in relation to the timing of any refund payments. H3GI considered that *“ComReg’s proposed method of payment / accounting to operators is inappropriate and unfair. H3GI considers that refunds should be payable immediately so that the relevant operator is no worse off in*

those circumstances, rather than ComReg retaining the capital and employing it by way of set-off against the following year's Spectrum Usage Fees ("SUFs")."

2.2.6.3 ComReg's position in Document 12/25

- 2.97 ComReg notes that the issue of delayed access to spectrum was considered in Document 12/25 (e.g. section 4.4.6) and ComReg stated that *"it would be remiss of ComReg to not to have in place mechanisms to address the scenario where delays arise (particularly where spectrum availability is dependent on circumstances outside ComReg's control)."*²²
- 2.98 To address this possibility of delayed commencement, Decision 3.4.17 of Decision 04/12 in chapter 8 of Document 12/25 provides that the competitive selection process will incorporate the *"reimbursement by ComReg of upfront fees (as described in the Information Memorandum) and SUFs to any Winning Bidder in the event that a Liberalised Use Licence in Time Slice 1 commences later than 1 February 2013, in accordance with the methodology as set out in the Draft Information Memorandum, and which will be detailed in the Information Memorandum."*
- 2.99 In addition, in section 4.4 of Document 12/25 ComReg noted that it had received respondents' views on the adequacy of the reimbursement measures proposed in Document 11/75. As set out in paragraph 4.116 of Document 12/25, ComReg stated that it
- *"will address Telefónica's submission regarding the adequacy of the reimbursement measures proposed by ComReg in Document 11/75 in its response to Document 11/75 and the final Information Memorandum. ComReg would note at this juncture, that the other three respondents to Document 11/75 (Vodafone, eircom Group and H3GI) all supported the principle of pro-rata refund of fees in the event of delayed access to spectrum"*
- 2.100 Finally, as discussed in section 5.9 of Document 12/25, Regulation 8(2) of the draft Regulations in Annex 7 of Document 12/25A have been amended to reflect the principle that refunds (or adjustments) of licence fees may be applicable.

2.2.6.4 ComReg's final position on the Information Memorandum

- 2.101 In relation to the refund of fees, ComReg notes that the respondents' raised two matters in this section, namely the level of any refund or adjustment to the

²² Paragraph 4.102 of Document 12/25.

Licence fees in the event of delayed commencement and the timing of this refund or adjustment.

- 2.102 In relation to the level of any refund or adjustment of fees, ComReg notes that Telefónica was the only respondent who contended that ComReg's proposal in Document 11/75 to be inadequate. In that regard, Telefónica asserts that the proposal does not recognise that an operator may suffer losses significantly in excess of the fee refunds proposed by ComReg.
- 2.103 While noting Telefónica's comment that an operator may suffer losses in excess of the fee refunds proposed, ComReg is of the view that it would be inappropriate and unnecessary to provide compensation for such potential losses, as this is something that a potential Bidder can appropriately factor into their bidding strategy, having considered the terms and conditions associated with the Award Process. For example, if a Bidder considered that there to be an increased likelihood of delayed commencement in one or more spectrum bands (or blocks in band) over others, then it could adjust its bidding strategy to take into account any potential loss in excess of the refunds proposed that it believed could be suffered through delayed access. Moreover, as Telefónica is aware, it is not uncommon for agreements to reasonably limit the liability of contracting parties for consequential losses that may arise.
- 2.104 Given the above and noting the support for ComReg's proposal from the other three respondents (eircom Group, H3GI and Vodafone), ComReg remains of the view that the pro-rata refund of fees (both Upfront and SUF) is appropriate as it fully reimburses the Liberalised Use Licensee for any Licence fees incurred in relation to spectrum Lots experiencing a delayed commencement.
- 2.105 In relation to the timing of refunds of Licence fees to Licensees, ComReg agrees with H3GI's suggestion that such refunds should have immediate effect and be disbursed as soon as is practicable. ComReg has included this text in the Information Memorandum.
- 2.106 Finally, ComReg notes that H3GI and Vodafone submitted comments on the wording of paragraphs 2.75, 2.76, and 2.78 of Document 11/75:
- in relation to paragraphs 2.75 and 2.76 of Document 11/75, as noted in Decision 3.4.17 of D04/12 ComReg has decided that the pro-rata portion of the upfront fees and the SUF will be refunded to licensees in the event that a Liberalised Use Licence commences later than 1 February 2013. The text of the Information Memorandum has been amended in line with Decision 04/12.

- in relation to paragraph 2.78 of Document 11/75, ComReg notes that further clarity on ‘contributing’ circumstances will be provided when the Transition Project Plan is formulated.²³ The transition plan will identify the transition activities and the milestones of each participant in the plan and by comparing the actual transition activities of participants against those agreed in the transition plan, it should be possible for ComReg to objectively identify likely and material contributing circumstances associated with a delay. Given this, ComReg believes that the text of paragraph 2.78 in Document 11/75 is sufficiently clear and that no changes are required.

2.107 Given the above, and ComReg’s decision as set out in Document 12/25, the Information Memorandum, among other things, includes text:

- clarifying that in the event of the delayed commencement of a Liberalised Use Licence, the refund (or adjustment) of the Licence fees (both Upfront and SUF) will be calculated on a pro-rata basis in relation to the spectrum delayed and the time period of the delay; and
- stating that any refunds (or adjustments) to licence fees will be payable promptly to the Licensee.

2.108 No material changes to the draft Regulations as set out in Annex 7 of Document 12/25A are required.

2.2.7 Enforcement Actions – Compliance with Licence Conditions, Licence Suspension, Licence Withdrawal

2.2.7.1 ComReg’s position in Document 11/75

2.109 Section 2.2.7 of Document 11/75 and Regulation 7 of the draft Regulations in Annex 2 of Document 11/75 set out ComReg’s then position on the enforcement action provisions to be included in the Liberalised Use licensing regime.

2.2.7.2 Views of Respondents

2.110 Two respondents, Vodafone and H3GI, commented on the enforcement action provisions proposed in Document 11/75. These views were summarised in section 5.8.4.2 of Document 12/25.

²³ Issues related to Transition are discussed further in Chapter 3 of this document.

2.2.7.3 ComReg's position in Document 12/25

2.111 Section 5.8.4.3 of Document 12/25 considered the views of the respondents on enforcement provisions to be associated with a Liberalised Use licence, and set out ComReg's decision that "*no changes are required to the text of the Information Memorandum (i.e. Section 2.2.7 of the Document 11/75).*"

2.112 In addition, Regulation 7 of the draft Regulations in Annex 7 of Document 12/25A set out the enforcement provisions proposed to be included in the Liberalised Use licensing regime.

2.2.7.4 ComReg's final position on the Information Memorandum

2.113 ComReg notes that all of the respondent's views on this matter have been considered in Document 12/25. In line with ComReg's position as set out in Document 12/25:

- no material changes have been made to the text of the Information Memorandum when compared to the text as set out section 2.2.7 of in Document 11/75; and
- no material changes to the draft Regulations as set out in Annex 7 of Document 12/25A are required.

2.2.8 Amendment of a Liberalised Use Licence

2.2.8.1 ComReg's position in Document 11/75

2.114 Section 2.2.8 and section 2.2.10 of Document 11/75 and Regulation 7 of the draft Regulations in Annex 2 of Document 11/75 set out ComReg's then position on the amendment provisions to be included in the Liberalised Use licensing regime.

2.2.8.2 Views of Respondents

2.115 Two respondents, Vodafone and H3GI commented on the amendment of a Liberalised Use Licence position as set out in Document 11/75. These views were summarised in section 5.8.5.2 of Document 12/25.

2.2.8.3 ComReg's position in Document 12/25

2.116 The views of these respondents were considered in section 5.8.5.3 of Document 12/25 where ComReg re-iterated its view that "*any amendment would be considered and decided upon in accordance with its statutory powers, functions,*

objectives and duties generally. ComReg also notes that the draft Regulations expressly provide that ComReg may amend licences in accordance with the Authorisation Regulations.”

2.117 In addition, the draft Regulations in Annex 7 of Document 12/25A set out the amendment provisions to be included in the Liberalised Use licensing regime.

2.2.8.4 ComReg’s final position on the Information Memorandum

2.118 ComReg notes that all of the respondent’s views on this matter have been considered in Document 12/25. In line with ComReg’s position as set out in Document 12/25:

- no material changes have been made to the text of the Information Memorandum when compared to the text as set out section 2.2.8 of in Document 11/75; and
- no material changes to the draft Regulations as set out in Annex 7 of Document 12/25A are required.

2.2.9 The Draft Regulations and an indicative Liberalised Use Licence

2.2.9.1 ComReg’s position in Document 11/75

2.119 Section 2.2.9 of Document 11/75 introduced the draft Regulations and the indicative Liberalised Use Licence. The draft Regulations were set out in Annex 2 of Document 11/75 and the indicative Liberalised Use licence was set out in Annex 3 of Document 11/75.

2.2.9.2 Views of Respondents

2.120 Four respondents, eircom Group, H3GI, Telefónica and Vodafone commented on specific aspects of the draft Regulations. These comments were summarised in section 5.9.1 of Document 12/25.

2.121 Three respondents, eircom Group, H3GI and Vodafone, commented on specific aspects of the draft licence conditions to be attached to a Liberalised Use Licence. These views were set out in section 5.10.1 of Document 12/25.

2.2.9.3 ComReg's position in Document 12/25

2.122 Section 5.9.2 of Document 12/25 considered the respondents' views in relation to the draft Regulations and set out ComReg's position on this matter. The draft Regulations were set out in Annex 7 of Document 12/25A. These draft Regulations are in line with ComReg's final position in Document 12/25.

2.123 Section 5.10.2 of Document 12/25 considered the respondents' views in relation to the indicative Liberalised Use licence and set out ComReg position on this matter. The indicative Liberalised Use licence was set out in Annex 8 of Document 12/25A and this indicative licence is in line with ComReg's position in Document 12/25.

2.2.9.4 ComReg's final position on the Information Memorandum

2.124 ComReg notes that all of the respondent's views on this matter have been considered in Document 12/25. The final draft Regulations and the final indicative Liberalised Use licence as set out in Annex 2 and Annex 3 of Document 12/52 are in line with ComReg's position as set out in Document 12/25 and do not contain any material changes compared to the draft Regulations and the indicative Liberalised Use licence as set out in Annex 7 and 8 of Document 12/25A.

2.2.10 Other considerations

2.2.10.1 ComReg's position in Document 11/75

2.125 Section 2.2.10 of Document 11/75 set out ComReg's then position on other considerations that could be relevant to a Liberalised Use licence, namely

- spectrum reviews²⁴; and
- spectrum pooling and sharing.

2.2.10.2 Views of Respondents

2.126 Three respondents, Telefónica, H3GI and Vodafone, commented on ComReg's spectrum sharing and pooling position as set out in Document 11/75. These views were set out in section 5.8.6.2 of Document 12/25.

²⁴ Views relevant to spectrum reviews were discussed in section 2.2.8 above.

2.2.10.3 ComReg's position in Document 12/25

2.127 Section 5.8.6.3 of Document 12/25 considered the respondents' views on spectrum sharing and pooling and noted that the issues raised by these views had already been considered and addressed in section 3.5 of Document 11/88 and section 4.4 of Document 11/89. ComReg noted that its position as set out in Document 11/75 is aligned with ComReg's position as set out in Documents 11/88 and 11/89, and given this, ComReg stated that it "*is of the current view that no changes are required to the text of the Information Memorandum (i.e. Section 2.2.10 of the Document 11/75).*"

2.128 In addition, Annex 7 of Document 12/25A set out the draft Regulations for a Liberalised Use licensing regime. These draft Regulations are in line with ComReg's position as set out in Document 12/25.

2.2.10.4 ComReg's final position in the Information Memorandum

2.129 ComReg notes that all of the respondent's views on this matter have been considered in Document 12/25. In line with ComReg's position as set out in Document 12/25:

- no material changes have been made to the text of the Information Memorandum when compared to the text as set out section 2.2.10 of in Document 11/75; and
- no material changes have been made in this regard to the draft Regulations as set out in Annex 7 of Document 12/25A.

2.3 Preparatory Licences – Terms and Conditions

2.3.1 ComReg's position in Document 11/75

2.130 Section 2.3 and Annex 2 of Document 11/75 set out the terms and conditions associated with a Preparatory Licence. Details were provided on the following matters:²⁵

- scope of the Preparatory Licence;
- Preparatory Licence duration and renewal;
- Licence Conditions applicable to all Preparatory Licences;

²⁵ At paragraphs 2.95 to 2.113 of Document 11/75.

- fees for a Preparatory Licence;
- enforcement Actions – compliance with Licence Conditions, Licence suspension, Licence withdrawal;
- Amendment of a Preparatory Licence;
- The Draft Regulations and an indicative Preparatory Licence;²⁶ and
- Other considerations.

2.3.2 Views of Respondents

2.131 One respondent, H3GI, commented on the terms and conditions associated with a preparatory licence.

- H3GI requested confirmation that ComReg will grant test and trial licences in respect of the trialling of this apparatus. This view was summarised in section 6.4.2 of Document 12/25;
- H3GI reiterated its previously expressed position that ComReg does not have the power to foreshorten licences in relation to paragraph 2.107 of Document 11/75. This view was summarised in section 5.8.4.2 of Document 12/25; and
- H3GI suggested amending the wording of the draft preparatory licence as set out in schedule 2 to the draft Regulations in Annex 2 of Document 11/75. This view was summarised in section 5.9.1 of Document 12/25.

2.3.3 ComReg's Position in Document 12/25

2.132 ComReg notes that the respondents' views on preparatory licences were considered in Document 12/25.

2.133 In section 6.4.3 of Document 12/25, ComReg considered the views in relation to the terms and conditions associated with a preparatory licence and ComReg stated that its final position is:

- to issue preparatory licences to all winners of Liberalised rights of use as soon as practicable following the Award Process.

²⁶ This is also considered in Annex 2 of Document 11/75.

- that *“it cannot guarantee the availability of test licences for the bands in question, as spectrum in the requested band may be licensed to another operator. However where possible ComReg will issue test licences.”*

2.134 ComReg notes that H3GI's remaining views were considered in

- Section 5.8.4.3 of Document 12/25, where ComReg set out its view on enforcement actions and states that “ComReg’s is of the current view that no changes are required to the text of the Information Memorandum”
- Section 5.9.2 of Document 12/25 where ComReg set out its view that it would incorporate H3GI’s suggested changes into the text of the draft Preparatory Licence.

2.135 Finally, it should be noted that Annex 7 of Document 12/25A set out the draft Regulations for a preparatory licensing regime. These draft Regulations are in line with ComReg’s position as set out in Document 12/25.

2.3.4 ComReg’s Final Position on the Information Memorandum

2.136 ComReg notes that Document 12/25 considered all of the respondents’ views on this matter and set out ComReg’s final position in relation to same. In line with ComReg’s position as set out in Document 12/25 the text of the Information Memorandum is materially the same as that set out in Document 11/75, with the exception that text explaining the non-exclusive nature of these licences (in line with ComReg’s position in section 5.2 of Document 12/25) has been added.

2.137 In light of the above, no material changes are required to the draft Regulations as set out in Annex 7 of Document 12/25A.

2.4 Associated Processes in this Award Process

2.138 Document 11/75 considered three associated process, namely the

- the early liberalisation option
- the possibility of advanced commencement
- transitional issues associated with GSM licensees

2.4.1 The Early Liberalisation Option

2.4.1.1 ComReg's position in Document 11/75

2.139 Section 2.4.1 of Document 11/75 discussed the early liberalisation option.

2.4.1.2 Views of Respondents

2.140 Two respondents, H3GI and Telefónica, commented on the early liberalisation option.

2.141 H3GI welcomed the early liberalisation option.

2.142 Telefónica asserted that:

- the award proposal *“does not provide sufficient incentive to operators to liberalise existing GSM licences, and contrary to optimum spectrum assignments, it would seem to produce an outcome in the 900 MHz band whereby one of the 7 lots remains only partially used during the first time.”* This view was set out in paragraph 4.205 of Document 12/25 (). and
- *“ComReg must find a means to liberalise or recover this impaired block prior to the auction”* and in paragraphs 4.48 to 4.53 of its submission in response to Document 11/75, Telefónica re-iterated the alternative proposals that it submitted in its response to Document 11/60..

2.4.1.3 ComReg's position in Document 12/25

2.143 The respondents' views on the early liberalisation option were considered in section 4.7 of Document 12/25 and ComReg's final position on this matter, among other things, stated that:

- *“in relation to Telefónica's submission that the current early liberalisation proposal does not sufficiently incentivise existing GSM licensees to liberalise and that this could lead to a spectrally inefficient outcome, ComReg notes that DotEcon does not consider the point to be valid given that the number of lots available in the auction to bidders other than Meteor, in the case of the 900 MHz band, is not affected by whether Meteor successfully liberalises or not.”* (paragraph 4.211 of Document 12/25)
- *“ComReg notes and agrees with the views expressed by DotEcon in response to the matter raised by Telefónica in its response to Consultation*

11/75 regarding the likely participation or otherwise by Meteor in early liberalisation in the 900 MHz band. As pointed out by DotEcon, the number of lots available to bidders other than Meteor is not affected by whether Meteor ultimately liberalises or not.” (paragraph 4.218 of Document 12/25)

2.144 In Chapter 8 of Document 12/25 (Decision 04/12) ComReg decided that the following elements of the early liberalisation option would be incorporated into the award process:

- *“the ability for an Existing GSM Licensee with GSM rights of use which are intended to continue after the commencement date for Time Slice 1 to relinquish all, or part, of its existing GSM 900 MHz and/or 1800 MHz spectrum rights of use, contingent on it winning an equivalent quantum of liberalised 900 MHz and/or 1800 MHz spectrum rights of use in Time Slice 1 (“Early Liberalisation Option”). Where an Existing GSM Licensee bids for a Lot in a spectrum band in which it has existing GSM 900 MHz and/or 1800 MHz spectrum rights of use, then it will win an equivalent quantum of liberalised 900 MHz and/or 1800 MHz spectrum rights of use in Time Slice 1 only if it secures them in open competition with other Eligible Bidders for similar rights, and pays a winning price determined on such a basis. The details of how this principle will be applied will be given in the Information Memorandum.”²⁷*

2.4.1.4 ComReg’s final position on the Information Memorandum

2.145 ComReg notes that Document 12/25 considered all of the respondents’ views on this early liberalisation option. In line with ComReg’s final position on this matter, the text of the Information Memorandum contains no material changes compared to that set out in section 2.4.1 of Document 11/75.

2.4.2 Advanced Commencement

2.4.2.1 ComReg’s position in Document 11/75

2.146 Section 2.4.2 of Document 11/75 discussed the possibility of advanced commencement of a Liberalised Use licence

2.4.2.2 Views of Respondents

2.147 One respondent, H3GI, commented on the advanced commencement proposal as set out in Document 11/75.

²⁷ Decision 3.4.12 of Decision 04/12.

- in relation to Method 1, H3GI noted that Document 11/75 stated that these lots would be available 'Y' months after the completion of the award. H3GI was disappointed that the draft information memorandum did not specify an exact date.
- in relation to Method 2, H3GI stated that it is imperative that ComReg ensures that the transitional activities of the GSM licensees are not used as a mechanism to unfairly delay advanced commencement for winning bidders who are non-GSM operators.²⁸
- H3GI asserted that ComReg should reserve Lot A of the 900 MHz band and unassigned 1800 MHz spectrum in both the first Time Slice and second Time Slice for a new band entrant. This view was summarised in section 7.3.1 of Document 12/25.
- H3GI stated that it did not understand why a bidder would pay additional daily 900 MHz SUFs payable from 5 months following the proposed auction. This view was set out in section 7.3.1 of Document 12/25.

2.4.2.3 ComReg's position in Document 12/25

2.148 Respondents' views on advanced commencement were considered in chapter 7 of Document 12/25 and section 7.5 of that document set out ComReg's final position on this matter, including that:

- under Method 1, *"the start date of an Advanced Commencement Liberalised Use Licence is to be set as 5 months from the outcome of the Assignment Stage of the Award Process. However under these scenarios where an existing GSM900 MHz licensee or a new entrant to the 900 MHz band is in a position to avail of Advanced Commencement earlier than 5 months from the outcome of the Assignment Stage, it can apply to ComReg for earlier Advanced Commencement of its Liberalised Use Licence, approval of which would not be unreasonably withheld."* (paragraph 7.74 of Document 12/25)
- *"ComReg does not agree with H3GI's submission that Block A in the 900 MHz band and unassigned spectrum in the 1800 MHz band should be reserved for a new entrant to the band."* (paragraph 7.57 of Document 12/25)

²⁸ Note, this view is considered in chapter 3 of this document where Transition issues are discussed.

- the SUFs associated with an advanced commencement licence would be adjusted on a pro-rata basis in relation to its duration of the advanced commencement period (paragraphs 7.50 to 7.53 and paragraphs 7.78 to 7.79 of Document 12/25).

2.149 In Chapter 8 of Document 12/25 (Decision 04/12) ComReg decided that the following elements of the advanced commencement position will be incorporated in the award process:

- *“the possibility of a Liberalised Use Licence for the 900 MHz band being granted with an Advanced Commencement Date where an Existing GSM Licensee wins rights in Blocks A and B, or where a non-Existing GSM Licensee wins rights in Block A, in the 900 MHz assignment stage.”* (c.f. Decision 3.4.10 of Decision 04/12); and
- *“without prejudice to the preceding paragraph, the possibility of a Liberalised Use Licence, or Liberalised Use Licences, for the 800 MHz, the 900 MHz and the 1800 MHz bands being granted with an Advanced Commencement Date which would be determined following the outcome of the assignment stage.”* (c.f. Decision 3.4.11 of Decision 04/12)

2.4.2.4 ComReg’s final position on the Information Memorandum

2.150 ComReg notes that all respondents’ views on advanced commencement of Liberalised Use licences were considered in Document 12/25. In line with ComReg’s final position on this matter, the text of the Information Memorandum contains no material changes compared to that set out in section 2.4.2 of Document 11/75, with the exception that the start date of an Advanced Commencement Liberalised Use Licence under Method 1 is set as 5 months from the outcome of the Assignment Stage of the Award Process.

2.4.3 Transition

2.4.3.1 ComReg’s position in Document 11/75

2.151 Section 2.4.3 of Document 11/75 discussed the transitional issues associated with the existing GSM licensees.

2.4.3.2 Views of Respondents

2.152 Aside from the transition issues that are discussed in chapter 3 of this document, one respondent, H3GI, commented on the transition issues as discussed in section 2.4.3 of Document 11/75.

- Referencing paragraphs 2.123 and 2.126 of Document 11/75, H3GI stated that “*ComReg should confirm that its draft Information Memorandum constitutes a notice to Existing GSM Licensees under regulation 15 (4) (a) of the Authorisation Regulations. ComReg should also confirm that its amendment of an existing GSM licensee’s licence to reflect the results of the Assignment Stage also includes an obligation to comply with the Relocation Project Plan.*”

2.4.3.3 ComReg’s position in Document 12/25

2.153 ComReg’s consideration of the transition issues associated with the existing GSM licensees was set out in chapter 6 of Document 12/25, and among other things, ComReg’s final position was that it would be appropriate to oblige all winning bidders and existing GSM licensees to participate in the assignment stage of the award process and to agree to the ‘transition rules’ including liquidated damages.

2.154 In Chapter 8 of Document 12/25 (Decision 04/12) ComReg stated that the following elements would be incorporated into the award process:

- “*an assignment stage, in which Winning Bidders and Existing GSM Licensees will be required to participate in which such parties are eligible to bid for their preferred locations in the relevant spectrum bands.*” (c.f. Decision 3.4.6 of Decision 04/12)
- “*all Winning Bidders and Existing GSM Licensees being required to abide by “transition rules” as set out in the Draft Information Memorandum, which will be detailed in the Information Memorandum*” (c.f. Decision 3.4.18 of Decision 04/12)

2.4.3.4 ComReg’s final position on the Information Memorandum

2.155 In considering H3GI’s submission in relation to Regulation 15(4)(a) of the Authorisation Regulations, ComReg firstly notes that the participation of the existing GSM licensees in the assignment stage of the award process and their agreement to the transition rules has already formed part of ComReg’s multi-band award consultation process and, furthermore, that ComReg has issued its substantive decisions on these matters (see the decisions set out in paragraphs 3.4.6 and 3.4.18 of Decision 04/12).

2.156 Given this, ComReg believes that the substantive issues associated with (a) the proposed amendment of Existing GSM licences in the 900 MHz and 1800 MHz

bands in accordance with the outcome of the Assignment Stage, and (b) compliance with transition rules have already been the subject of appropriate notification and public consultation (including having due regard to the views of affected licensees and other interested parties). Whilst the actual amendment of Existing GSM licences (to reflect the specific frequency assignments determined by the Assignment Stage) can only occur following completion of the Assignment State, such matters can be reasonably and properly seen as either procedural in nature and/or minor in nature where the amendments have already been agreed with the Existing GSM Licensee.

2.157 Given this, ComReg does not consider it necessary to further consider H3GI's submission in this regard. In line with ComReg's final position on this matter, the text of the Information Memorandum contains no material changes compared to that set out in section 2.4.2 of Document 11/75.

2.5 Other Issues 11/75

2.5.1 Clarity on licence terms

2.158 In its response to Document 11/75, Telefónica claimed that there was a large number of cases where ComReg has introduced uncertainty regarding the licence terms. While Telefónica noted that each of these cases is important individually, it asserted that "*cumulatively they have the effect to [sic] undermine a bidder's ability to assess exactly what rights will have been obtained during the proposed auction, and this in turn impacts valuations.*" Telefónica highlighted the following areas in the context of this comment:

- *“Annual renewal (emphasis on fact that licence is renewed annually, without comfort on exactly what conditions will have to meet in order to be assured of renewal)*
- *Non-exclusivity of licences*
- *Spectrum Hoarding*
- *Spectrum pooling (“it is not possible to guarantee that individual spectrum and pooling agreements will be permitted”)*
- *Spectrum trading (“yet to set out its procedures...will be consulting on same in the coming months”)*

- *Coverage Compliance programme (“shall be in such form as may be specified by ComReg”)*
- *Quality of Service Compliance programme (“shall be in such form as may be specified”)*
- *General rights to amend the licence terms.”*

2.5.2 ComReg’s Final Position

2.159 In considering Telefonica’s view, ComReg notes that this response to consultation and Document 12/25 has provided further clarity on all of the individual items listed as follows:

- annual renewal (see section 5.8.2 of Document 12/25 and section 2.2.2 of this document);
- non-exclusivity of licences (see 5.8.1 of Document 12/25 and section 2.2.1 of this document);
- spectrum Hoarding (see 5.9 of Document 12/25 and section 2.2.3 of this document);
- spectrum pooling (see 5.8.6 of Document 12/25 and section 2.2.10 of this document);
- spectrum trading (see 5.8.3 of Document 12/25 and section 2.2.3 of this document);
- coverage Compliance programme (see 5.5 of Document 12/25 and section 2.2.3 of this document);
- quality of Service Compliance programme (see 5.6 of Document 12/25 and section 2.2.3 of this document); and
- general rights to amend the licence terms (see 5.8.5 of Document 12/25 and section 2.2.8 of this document).

2.160 ComReg therefore believes that clarity has been provided on the licence terms, and ComReg therefore refutes Telefónica’s claim that there are a large number of cases where ComReg has introduced uncertainty regarding the licence terms, which cumulatively undermine a bidder’s ability to assess exactly what rights it will obtain in the award process.

Chapter 3

3 The Award Process

3.1 In Chapter 3 of Document 11/75, ComReg set out its view on the details of the Award Process. This consisted of the following:

- Lots Available;
- Process overview and indicative timeline;
- Application Stage;
- Qualification Stage;
- Main Stage (if required);
- Assignment Stage;
- Notification and Grant Stage;
- Transition Rules;

3.2 ComReg's consideration of the responses to above is set out below.

3.1 Lots Available, Process Overview and Indicative Timeline

3.1.1 ComReg's Position in Document 11/75

3.3 Paragraph 3.1 set out the two types of Lots being made available in the Award Process:

- Generic Lots which are available to all Interested Parties (45 in total), and
- Party-specific Lots which are only available for specific Interested Parties to bid on (11 in total).

3.4 Paragraph 3.2 and Table 7 provided an overview of the 45 Generic Lots, which are categorised into six different Lot Categories (Categories 1 – 6).

3.5 Paragraphs 3.3 – 3.5 and Table 8 detailed the 11 Party-specific Lots, which are categorised into four different Lot Categories (Categories 7 – 10). Each Existing Licence holder will retain rights of use of the existing amount of spectrum in its

current licence until that licence expires. The Existing Licence holder is permitted to bid in the Award Process to liberalise all or some of these Lots. An Existing Licence holder would be permitted to use its Party-specific Lots on a liberalised basis if the Winning Combination of Bids at the end of the Main Stage included its Party-specific Lots (or if no Auction is needed and a Bidder has applied for, and therefore won, these Party-specific Lots). Where an Auction is required and these Lots are not included in an Existing Licence holder's Winning Combination of Bids at the end of the Main Stage of the Auction, the Existing Licence holder will continue to hold the relevant amount of spectrum on an unliberalised basis subject to Existing Licence conditions.

3.6 Tables 7 and 8 set out the following information for each of the Lot Categories (Categories 1 – 10):

- Number of Lots available;
- Size of a Lot (MHz);
- Reserve Price per Lot and annual SUF prior to indexation;
- Eligibility points per Lot.

3.7 All Lots within a Lot Category are identical for the purpose of the Main Stage, whereas the Assignment Stage determines the specific frequencies won by a successful Bidder and the frequencies where unliberalised Existing Licence holders shall be positioned.

3.8 Paragraph 3.8 to 3.9 in addition to Figure 4 of Document 11/75 described the overall structure of the Award Process and detailed all the encompassing stages, being:

- Application Stage;
- Qualification Stage;
- Main Stage comprising of a combinatorial clock auction²⁹ (only required where demand exceeds supply);
- Assignment Stage; and
- A Notification & Grant Stage.

²⁹ If an Auction is necessary, an Electronic Auction System (EAS) interface will be used to allow Bidders check and submit their Bids.

3.9 Paragraph 3.10 in addition to Table 9 of Document 11/75 provided the proposed timeline with indicative milestones for the Award Process, with ComReg stating that this was subject to adjustment by ComReg at its discretion.

3.1.2 Views of Respondents

3.10 ComReg notes that there were no specific views presented by respondents in relation to Lots Available (aside from tangential arguments presented in relation to Time Slices, dealt with in Section 3.2 of this Document).

3.11 Four respondents (Vodafone, Telefónica, eircom Group and H3GI) provided comments on the Process overview and indicative Timeline. These comments can be categorised as follows;

- Timetable issues;
- Bidder information issues; and

3.1.2.1 Timetable Issues

3.12 Numerous comments were provided on the proposed timeline and milestones presented by ComReg in Document 11/75, these comments being;

- ComReg should establish, publish and maintain a high level project plan incorporating the material presented in the draft IM and indicate a best estimate date 'X' for the commencement of the Award Process (eircom Group);
- Concern that the mock auction is proposed to be only one week in advance of the commencement of the start of the auction, and that additional mock auctions take place very soon after publication of the final IM (eircom Group);
- The scope for significant amendments to reduce the complexity of the auction seems limited given the need to complete the Award Process without further delay. ComReg should ensure Interested Parties have a full understanding of how the auction format will operate and associated bid management issues well in advance of the commencement of the auction but ideally in advance of publication of the final IM (Vodafone);
- The timelines are unrealistically short and unlikely to be met, and if the proposed timelines are adhered to they are unlikely to provide sufficient time for prospective licence applicants to provide effective feedback, obtain

necessary clarification or make optimal preparations to participate in an auction (Vodafone);

- ComReg must ensure that there is at least 14 weeks public notification prior to the commencement of the Main Stage and Assignment Stage (Vodafone);
- ComReg's proposed 2 week period for Questions and Answers is too short and should be extended to 4 weeks (Vodafone);
- ComReg should schedule at least one mock auction well in advance of the actual auction, ideally prior to the Final IM to allow for amendments (Vodafone);
- ComReg should clarify the timeframe that will be given for examination of bidding materials and the Electronic Auction System (EAS), with a recommendation of 3 weeks given due to the complexity of the proposed auction (Vodafone);
- ComReg should provide an indicative timetable for completion of each of the steps set out in Table 9 of Document 11/75, and allow an extra week for the submission of Application Forms and Deposits (with this extra week cascading and pushing each subsequent step out by an extra week from the date of publication of the Final IM) (H3GI).

3.1.2.2 Bidder Information Issues

- 3.13 Two respondents, Telefónica and Vodafone provided specific comments on Bidder information issues.
- 3.14 Telefónica stated that ComReg should provide all Bidders with access to the Winner and price determination software at the earliest opportunity and at least 3 months in advance of the beginning of the auction, citing Ofcom as an example of a regulator which allows prospective bidders test the process.
- 3.15 Telefónica also queried³⁰ that in the event a bidder chooses to liberalise one of its Party-specific lots, how would ComReg decide which one of the Party-specific lots should be liberalised, or how does the bidder indicate which Party-specific lot it is liberalising. Telefónica state that there are price implications depending on whether a fully occupied or partially occupied lot is liberalised.

³⁰ Telefónica email of 5 March 2012, as published in Document 12/21, Item 10

3.16 Vodafone asked ComReg to clarify what the bidder interface would look like for supplementary bid entry and what information is available to a bidder should it enter a set of bid values that violate one or more caps. Vodafone asked when this design work would be completed if not yet completed, and requested that ComReg publish a description of this design or make an early version of the bidder interface software available without delay.

3.1.3 ComReg's Position in Document 12/25

3.1.3.1 Timetable Issues

3.17 In Section 9 of Document 12/25, ComReg outlined the next steps and provided an outline of the process to the start of the auction.

3.1.4 Submissions Received Since Document 12/25

3.1.4.1 Bidder Information Issues

3.18 In a letter dated 13 April 2012, H3GI stated its support for Vodafone's position (as presented in paragraph 3.16 above) regarding bidder interface for supplementary bid entry.

3.1.5 DotEcon's Assessment

3.1.5.1 Timetable Issues

3.19 In light of respondents' views on the indicative timetable as set out in Document 11/75, DotEcon notes in Chapter 3 of Document 12/51 that the timetable could benefit from some minor revisions.

3.20 With respect to the period permitted for submitting questions once the Final IM is published, DotEcon recommends that ComReg should consider allowing an additional 2 weeks so that interested parties would have a total of 4 weeks following the publication of the IM in which they could submit questions to ComReg. This additional time, in DotEcon's view, would allow Interested Parties more time to consider the information on the Award Process and Auction Rules so as to allow a full assessment of any further clarification points that may reasonably be required. DotEcon recommends this extension on the proviso that it would not affect the rest of the timetable for the Award Process. Responses to these questions would be published no later than 2 weeks after the deadline for submissions of questions (i.e. 6 weeks after the publication of the Final IM) leaving the rest of the timetable unchanged.

- 3.21 DotEcon considers that H3GI's request for an extra week before the deadline for submission of application forms and deposits could be met without significant impact on the overall timetable. Given this, it recommends that the deadline for application forms and deposits be set 8 weeks following publication of the Final IM.
- 3.22 DotEcon believes that these adjustments will provide potential Bidders sufficient time to ensure that they fully understand the Auction Rules and how the Auction format will operate. In addition, the presentation to Interested Parties, the distribution of Bidder material and the opportunity for a mock auction should provide plenty of opportunity for Bidders to consider the Auction format and prepare for the Auction.
- 3.23 DotEcon then considers Vodafone's request for a mock auction to be scheduled well in advance of the actual auction and preferably prior to publication of the Final IM to allow amendments. DotEcon recommends that ComReg revise the timing of some of the milestones so as to allow Bidders access to Bidder material and the Auction system as soon as is appropriate.
- 3.24 However, DotEcon notes that, given that the Final IM is now published, it does not consider it appropriate to hold any mock auctions prior to its publication. Furthermore, it considers that Bidders ought to have sufficient time to attend the information presentation and process the responses to any questions they may have raised before a mock auction is held. DotEcon accepts that an auction such as that proposed has not taken place in Ireland before, that bidders could benefit from the holding of a mock auction considerably in advance of the main auction and that such a mock auction should take place at the earliest opportunity. Given that access to the EAS in the form of a mock auction would usefully be restricted to Qualified Bidders only, DotEcon considers that such an event can only occur following the deadline for applications. Taking all of this into account, DotEcon recommends a mock auction (including use of the EAS and provision of bidding material) be held 2 weeks following the deadline for submission of applications, that is, during the tenth week following the publication of the Final IM and at least 4 weeks in advance of the proposed start date of the actual auction. Considering that bidding material and the EAS will be made available 4 weeks prior to the auction, DotEcon notes that this should satisfy Vodafone's request of this material being available 3 weeks prior to the auction.
- 3.25 DotEcon's recommended modified timetable is set out in the table below, which also outlines the previously proposed timetable in Document 11/75. DotEcon has added a number of additional milestones that were not included in the equivalent

table presented in the draft IM. For example, following the discussion provided in Chapter 3 of its report on the information policy that will be in place during the Award Process, DotEcon notes that the restrictions on communication between Interested Parties will come into force for an Applicant at the time it submits its application, and no later than the deadline for submission of application forms. DotEcon has also added milestones to represent the start and end of the alternative assignment discussions and the Transition project plan.

Stage of process	Milestone	Timeline
Application Stage	Publication of Final Information Memorandum on ComReg's website	Friday 25 May 2012
	Presentation to Interested Parties on the Award Process and the Auction Rules	Friday 8 June 2012
	Deadline for submission of questions regarding the Award Process	16:00 (local time) on Friday 22 June 2012
	Final date for responses to questions on the Award Process to be published on ComReg's website	Friday 6 July 2012
	Deadline date for submission of Application Forms	From 10:00 (local time) on Monday 16 July 2012 to 16:00 (local time) on Friday 20 July 2012
	Deadline date for submission of Deposits	23:59 (local time) on Friday 20 July 2012
	Restrictions on auction-related communications come into effect	On submission of first Application to ComReg
Qualification Stage	Circulation of Bidder Materials for accessing and using the EAS to the Applicants;	Week beginning Monday 23 July 2012
	Mock Auction for each Applicant	Monday 30 July 2012 to Friday 3 August 2012

Table 2. Timetable for the Award Process

- 3.26 DotEcon notes that Vodafone's request for a minimum period of 14 weeks between publication of the Final IM and commencement of the Main Stage is satisfied in the timetable in the table above, which allows at least 14 weeks. However, DotEcon considers that the commencement date of the Assignment Stage cannot be set this far in advance, as the start date for the Assignment Stage is contingent on the duration and completion of the Main Stage.
- 3.27 eircom Group comment that ComReg should establish, publish and maintain a high level project plan incorporating the material presented in the draft IM and clearly indicating a best estimate of date "X" for the commencement of the Award Process. DotEcon notes that this request was made in November 2011 long before the publication of Document 12/25 and before ComReg could have any reasonable degree of certainty around the publication date of the Final IM. Given that, with the publication of this document, date "X" is now known) and eircom Group now have the certainty they sought, it is not necessary to consider this matter further.
- 3.28 Overall, DotEcon considers the timeline proposed above as being realistic. In proposing the revisions, DotEcon has taken into consideration the views of respondents and consider that potential Bidders should have sufficient time to prepare for the Auction and have access to the EAS and Bidder material at least 4 weeks in advance of the proposed start of the Auction.

3.1.5.2 Bidder Information Issues

- 3.29 DotEcon note in Section 6.2 of Document 12/51 that Telefónica's request for access to standalone winner and price determination software at least 3 months in advance of the auction is met in ComReg's timeline, as shown in table 2. DotEcon note in Section 5.1.4 of Document 12/51 that a beta version of the winner and price determination software will be made available in the ComReg website,
- 3.30 Regarding Vodafone's queries (paragraph 3.16), DotEcon firstly notes that bidders will be notified when submitting supplementary bids if their bids violate any of the caps. Whilst DotEcon are not able to provide a finalised version of the interface at this time, based on the timeline (see Table 1 above), bidders will have sufficient time to familiarise themselves with the system in advance of the auction. Also, DotEcon note that there will be a bidder presentation and bidders will have access to bidder material and will gain firsthand experience of using the auction software during the mock auction.

3.31 DotEcon stated that in the event that some but not all of the Party-Specific Lots of a Bidder in the same Party-Specific Lot Category are within the Winning Combination of Bids, the Lot partially held shall be the first lot to be relinquished in exchange for the right to use a 2 x 5MHz Lot in the same band and Time Slice:

- Where this partial liberalisation relates to Party-Specific Lot Category 7, the first Lot to be relinquished will be that relating to 2 x 2.2 MHz (or 2 x 2.4 MHz if neighbouring arrangements demand this) of the Bidder's Existing GSM Licence; and
- Where this partial liberalisation relates to Party-Specific Lot Category 8, 9 or 10, the first Lot to be relinquished will be that relating to 2 x 4.4 MHz (or 2 x 4.6 MHz if neighbouring arrangements demand this) of the Bidder's Existing GSM Licence.

3.32 DotEcon also stated that all further spectrum relinquished by Existing GSM Licensees will be in 2 x 5MHz Lots.

3.1.6 ComReg's Final Position

3.1.6.1 Timetable Issues

3.33 ComReg has duly taken respondents' and DotEcon's comments into consideration when reconsidering the proposed indicative timetable as presented in Document 11/75.

3.34 Firstly, ComReg agrees with DotEcon that an extension to the period for submitting questions from 2 weeks to 4 weeks would be beneficial as it would allow respondents more time to fully consider the information in the Final IM and the associated detailed auction rules. In this regard, and noting that DotEcon's recommendation to increase this period is both beneficial (without any obvious downside) and does not affect the rest of the timetable for the Award Process, ComReg will extend the deadline for submitting questions to 4 weeks after the publication of the Final IM. This modification is detailed in Table 2 above. In line with this, ComReg intends to adopt DotEcon's recommendation that responses to these questions will be published no later than 2 weeks after the deadline for submissions of questions (i.e. 6 weeks after the publication of the Final IM).

3.35 ComReg agrees with DotEcon that H3GI's request for an extra week before the deadline for submission of application forms and deposits (meaning the deadline would be 8 weeks from publication of the Final IM) could be met without significant impact on the overall timetable. This modification benefits participants

while impacting on the overall timetable in quite a minor way, and has therefore accordingly been incorporated into the modified timetable shown in Table 2.

- 3.36 Given that the Final IM is now published, it is not possible to grant Vodafone's request that a mock auction take place prior to the publication of the Final IM. In any case, ComReg agrees with DotEcon that Bidders ought to have sufficient time to attend the information presentation and process the responses to any questions they may have raised before a mock auction is held. This will provide greater clarity regarding the mock auction and enable Qualified Bidders to filter out any misinterpretations and queries as early as possible in the process. Furthermore, a mock auction would usefully be restricted to Qualified Bidders only and therefore should only be scheduled after all applications have been received and processed. However, seeing as an auction such as that proposed has not taken place in Ireland before, ComReg agrees with DotEcon that Qualified Bidders would benefit from a mock auction at the earliest opportunity in advance of the start date of the auction. As such, ComReg is adopting DotEcon's recommended modification to the timetable (as shown in Table 2 above), whereby a mock auction (including use of the EAS and provision of bidding material) will be held during the tenth week following the publication of the Final IM and at least 4 weeks in advance of the proposed start date of the actual auction. ComReg notes that this modification more than satisfies Vodafone's request for a mock auction to take place 3 weeks prior to the auction.
- 3.37 DotEcon made numerous modifications to the indicative timeline in its report. As stated in the paragraphs 3.11 and 3.12 of the final IM (and with respect to the later stages of the Award Process i.e. the Main Stage, the Assignment Stage, the Notification and Grant Stage and the Transition Project Plan), ComReg is currently not in a position to announce with certainty the timing of these stages, as the timing of these stages depends on the outcome of previous stages in the Award Process and/or circumstances outside ComReg's control. However during the course of the Award Process, ComReg will provide further information on the timings of these stages to the appropriate parties.
- 3.38 ComReg considers that these additions to the timeline simply provide more clarity regarding when events are scheduled. Accordingly, ComReg has included this information in Table 2 for the benefit of Interested Parties.

3.1.6.2 Bidder Information Issues

- 3.39 Regarding Telefónica's request that all Bidders be provided with access to the Winner and price determination software at least 3 months in advance of the

beginning of the auction, ComReg notes that the timeline set out in Table 2 now accommodates Telefónica's request.

- 3.40 With respect to Vodafone and H3GI's comments seeking clarification regarding the bidder interface for supplementary bid entry, ComReg note that DotEcon has clarified that bidders will be notified when submitting supplementary bids if their bids violate any of the caps. ComReg also notes that DotEcon has stated that the bidder interface is not available at this time, however ComReg considers that the circulation of Bidding Materials and the hosting of mock auction at least 4 weeks in advance of the auction allows Qualified Bidders sufficient time to familiarise themselves with the system in advance of the auction. With this in mind, ComReg will follow the timelines as set out in Table 2.
- 3.41 With regard to Telefónica's query regarding which Party-specific lot is liberalised in the event that a bidder chooses to liberalise some but not all of its Party-specific lots (as detailed in paragraph 3.15), ComReg refers readers to Section 4.5 of Document 11/75 for background. Should an existing GSM Licensee liberalise some (but not all) of its Party-specific lots³¹ within a spectrum band, the existing GSM Licensee would have to relinquish the currently partially assigned 2 x 5 MHz block for liberalisation first.
- 3.42 For example, should eircom Group win one Party-specific 900 MHz 2 x 5 MHz Lot in Time Slice 1, the rules (as stated in paragraph 4.203 of Document 11/75 (Chapter 4 of IM Document 12/52)) would mean that eircom Group must be assigned the same number of 2 x 5 MHz lots already held by it at the start of the award process, being two lots. Therefore, eircom Group would have to liberalise its existing partially assigned 2 x 5 MHz lot, resulting in eircom Group being assigned 2 x 5 MHz of liberalised 900 MHz spectrum for Time Slice 1, and maintaining 2 x 5 MHz for GSM purposes only. In any event, any existing GSM licensee who maintains spectrum for GSM purposes must adhere to the technical co-existence rules as detailed in footnote 70 of Document 11/75.
- 3.43 A licensee will receive appropriate rebate for the partial Lot relinquished. ComReg's position with respect to rebates is set out in Section 4.7.4 of Document 12/25, paragraph 4.221 in particular.

³¹ eircom Group has two 900 MHz and three 1800 MHz Party-specific lots, whilst Vodafone and Telefónica each have three 1800 MHz Party-Specific lots each

3.2 Award Process Complexity

3.2.1 Views of Respondents

3.44 Three respondents (Telefónica, eircom Group and Vodafone) provided comments on the complexity of the Award Process.

Vodafone and Telefónica consider the Award Process detailed in Document 11/75 is too complex;

- Vodafone considers that the current auction design is becoming increasingly and unnecessarily complex, making it difficult for Bidders to develop and communicate their bidding strategies. It considers that complexity imposes cost and risks in an award process that could affect the possibility of an efficient spectrum allocation outcome; and
- Telefónica considers that the complexity of the auction design detailed in Document 11/75 results in comprehensibility being in serious doubt and introduce asymmetries between bidders in deciding how much effort to invest in researching and understanding the award format, contradicting ComReg's goal of promoting competition and efficient outcomes.

3.45 Telefónica stated that it was not aware of the new activity rules being tested or used elsewhere, and question whether it is sensible to pioneer a new activity rule in an already complex and unnecessary lot structure, and suggested that removing Time Slices and party-specific Lots may address its concerns.

3.46 Telefónica and eircom Group provided other comments on the complexity of the Award Process, particularly that the complexity could be reduced by removing Time Slice and party-specific Lots and that the auction has lead to a fatal flaw and is susceptible to strategic behaviour. The views of these respondents are set out in Sections 4.3.3 and 4.3.4 of Document 12/25. In an email to ComReg³², eircom Group requested clarification as to why the sections of the Telefónica submission to Document 11/75 relating to a potential flaw were obscured, and were of the view that all interested parties should have the opportunity to review this obscured text.

3.2.2 ComReg's Position in Document 12/25

3.47 Section 4.4.6 of Document 12/25 specifically addresses Telefónica's concerns regarding the complexity created by Time Slices and Party-Specific Lots.

3.48 Concerns presented by eircom Group and Telefónica regarding a perceived flaw and susceptibility of the auction to strategic behaviour is addressed in Section 4.3.6. Notably, ComReg stated that:

- It was of the view that the adjusted winner determination and pricing method appropriate for an auction with party-specific lots, as described in Annex A, functions correctly; and
- the pricing from the Swiss auction is a function of opportunity cost pricing. ComReg agreed with DotEcon that using a CCA makes a 'strategic demand reduction' strategy redundant *and* that ComReg's auction format proposal encourages straightforward bidding.

3.2.3 Views of Respondents to Submissions received since Document 12/25

3.49 Telefónica reiterated its views (as presented in paragraph 3.46) that dropping the first time slice and Party-specific lots would greatly simplify the award process in a letter³³ to ComReg. Telefónica in this letter again argued that it is concerned that CCA auctions can be subject to strategic manipulation. Telefónica states that this is particularly the case in ComReg's proposed auction as the time-slicing creates certain categories of lot where demand is easy to predict, and if ComReg persists with the auction as proposed, Telefónica expects that appropriate activity rules will be adopted to eliminate the possibility of strategic manipulation of the outcome.

3.50 eircom Group again raises concerns regarding ComReg's CCA approach³⁴, again referring to the outcome of a similar auction in Switzerland. Eircom Group considers that ComReg's Decision "does not include any mechanisms that would prevent such an outcome as the result of strategic bidding", and is concerned that there could be significant asymmetries paid by bidders for similar quantum of spectrum. Eircom Group asserted that it remains possible that a bidder in the

³³ Telefónica letter submitted to ComReg on 13 April 2012, this letter is available in ComReg Document 12/49

³⁴ Eircom Group letter submitted to ComReg on 3 April 2012, this letter is available in ComReg Document 12/49

auction could inflate the final price paid by other bidders without affecting its own price and eircom Group considers that this is inconsistent with ComReg's auction objectives as detailed in Section 12.1 of Document 09/99.

3.2.4 DotEcon's assessment

- 3.51 DotEcon set out its considerations on this matter in Section 7.2 of Document 12/51. In this regard, DotEcon refer back to Section 6.4 of Document 12/24 where it considered that the Swiss auction result did not raise any concerns regarding the appropriateness of the CCA format, and noted the acclaimed disparity in prices paid (eircom Group) was not a result of successful strategic bidding. Further to this, DotEcon note that possible gaming strategies are not typically beneficial in a CCA, whereas they are possible in other auctions formats, e.g. SMRA.
- 3.52 With respect to Telefónica's arguments, DotEcon does not see how it is possible that time-slicing creates certain categories of lots where the demand is easy to predict, and how this could be used to benefit strategic manipulation. DotEcon note that these claims are unsubstantiated with evidence.

3.2.5 ComReg's Final Position

- 3.53 ComReg has previously presented submissions to Document 11/75 on this issue and these submissions were considered in Document 12/25.
- 3.54 ComReg received numerous comments on this matter in submissions to Document 12/25. All three respondents' reiterated views that the auction process proposed is too complex. In this regard, ComReg refers to its analysis as presented in Sections 4.3.6 and 4.4.6 of Document 12/25 which provides detailed justification for ComReg's auction process.
- 3.55 With regard to Telefónica and eircom Group's arguments that ComReg's CCA is susceptible to strategic manipulation and bidding, ComReg analysed these submissions, and provided responses³⁵ to same. In these responses, ComReg described that it considers the arguments regarding potential for strategic bidding to be fully considered and addressed in Documents 12/24 (Section 6.4) and 12/25 (Section 4.3), and there was no justification to introduce any changes to the auction process based on Telefónica and eircom Group's concerns on this issue. ComReg notes that DotEcon states that the Swiss auction did not suffer from strategic manipulation, and CCA's are not facilitative to such strategies.

³⁵ Response to eircom Group letter sent by ComReg on 5 April 2012, and response to Telefónica letter sent by ComReg 19 April 2012, both of these letters are available in ComReg Document 12/49.

3.56 In relation to eircom Group's concerns regarding potential price inflation and significant asymmetries paid by bidders for similar quantum of spectrum (referencing the Swiss auction outcome), ComReg addressed this matter in its letter to eircom Group. ComReg stated in this letter that the soon to be published IM would give Interested Parties further clarification and detail in relation to auction rules and processes, and therefore ComReg does not find it necessary nor appropriate to enter into further correspondence or consultation on this matter.

3.57 With respect to Telefónica's arguments relating to;

- dropping the first time slice and Party-specific lots to greatly simplify the award process; and
- demand is easy to predict, and appropriate activity rules must be adopted to eliminate the possibility of strategic manipulation of the outcome,

ComReg notes that its letter to Telefónica inherently stated that ComReg has addressed these matter and Telefónica's arguments in Document 12/25, and therefore ComReg did not need to provide further consideration on this matter. ComReg agrees with DotEcon's assessment that Telefónica have made these assertions without any examples or evidence, and ComReg agrees that Time Slices do not create lot categories that are easy to predict nor benefit strategic manipulation of the auction.

3.3 Application Stage

3.3.1 ComReg's Position in Document 11/75

3.58 Section 3.3 of Document 11/75 outlined the Application Stage and all its relevant components. In this section ComReg noted that the Award Process would begin on the day of publication of the Final IM, and Interested Parties would have 7 weeks from that date during which they must submit a valid application and associated Deposit. To be eligible to qualify to be awarded spectrum in the Award Process, Interested Parties must submit;

- a completed Lot Application Form (detailed in Section 3.3.1);
- a cleared monetary Deposit (detailed in Section 3.3.2);
- an Administrative Information Form (detailed in Section 3.3.3); and

- any other documentation required to be annexed to the Application (detailed in Section 3.3.3).

- 3.59 Section 3.3.4 of Document 11/75 outlined the Ownership rules to which Bidders will be subject throughout the Award Process in order to both Bid for and win Licences as independent entities and in accordance with applicable law. These rules prevent circumvention of spectrum caps whilst also preventing a Bidder from having an unfair advantage by being able to coordinate with another Bidder. No Bidding Group is permitted to be connected or associated with another Bidding Group.
- 3.60 Section 3.3.5 of Document 11/75 set out the rules governing the treatment of Confidential Information and the behaviour of Interested Parties generally prior to and after submission of Applications until ComReg announces the outcome of the Award Process. Each Applicant would be compelled to adhere to the Confidential information and Bidder behaviour rules, whilst also taking all reasonable measures to ensure that its Connected Persons, employees and Insiders also comply with these rules.
- 3.61 Section 3.3.6 of Document 11/75 set out the Application procedure that an Interested Party must adhere to in order to be considered in the Qualification Stage.

3.3.2 Views of Respondents

3.3.2.1 Lot Application Form

- 3.62 In relation to the paragraph 3.21 of the draft IM, H3GI took the view that ComReg should not have the discretion to unilaterally reduce the number of lots bid for so that the spectrum caps are not exceeded and treat such an application as valid and binding with the necessary amendments. Instead, ComReg should contact the applicant and seek to resolve the issue.

3.3.2.2 Bidder Declaration

- 3.63 ComReg received a confidential submission to Document 11/75 from eircom Group which detailed concerns that the wording in the Bidder Declaration (particularly A6.14 and A6.15) within the Administrative Information form (Annex 6 of Document 11/75) could prevent eircom Group from bidding. Eircom Group provided alternative text for the two paragraphs in question.
- 3.64 **[CONFIDENTIAL]**

3.3.2.3 Ownership rules

3.65 H3GI made a specific comment in relation to the text contained within paragraph 3.47 of Document 11/75, with H3GI presuming that the reference to “*Irish Communications Providers*” should instead be a reference to “*Communications Providers*”.

3.3.2.4 Confidential information and Bidder behaviour

3.66 Telefónica and eircom Group raised issues specific to Section 3.3.5 of Document 11/75.

3.67 Both eircom Group and Telefónica raise concerns regarding the prohibition on Bidders from communicating with one another from the date of publication of the Final IM (as set out in Document 11/75, paragraph 3.62). In particular:

- eircom Group does “*not believe that this is workable*”. It notes that potential auction applicants do not know when ComReg will publish the Final IM and therefore cannot plan effectively to participate in the auction process. It goes on to note that the US Federal Communications Commission (FCC) has auction collusion rules which include a ‘bright line rule’ that prohibits communication among applicants only from when they submit their auction application until the payment deadline after the auction. It also notes that the FCC make the auction applications public including ownership information so that all Applicants know with whom they may not communicate during the prohibited communication period. In this light, eircom Group asserts that a rule that disallows communication with other potential bidders on the date that the regulator releases the Information Memorandum makes no sense and will be impossible to enforce since prospective bidders will not know with whom they are prohibited from communicating with. Finally, eircom Group adds that the process should be modified to include a notice of a fixed start and end date for prohibited communication which it believes is very important to the integrity of the auction process.
- Telefónica is concerned that there will be a delay between the publication of the final IM and the start of the auction (e.g. with a legal challenge) which it believes would leave operators bound by these rules for a considerable period. Telefónica also states that in extreme cases and with a significant delay, it is unclear whether operators could enter into discussions on matters which are not directly related to the Award Process. Telefónica suggests that the rules on communications only apply for a defined period before applications are submitted (e.g. 4 weeks) rather than from the date the final

rules are published. Telefónica adds that ComReg must accept that normal business communication between bidders must continue through the Award Process (providing it does not compromise the process).

3.68 Telefónica also raises concerns regarding ComReg's Bidder Exclusion text (as set out in paragraph 3.73 of Document 11/75). Telefónica believes that it is necessary to remove all bids made by a Bidder entirely from the Auction should that Bidder be excluded from the auction once bidding has begun, and it would be "*fundamentally erroneous*" to continue the auction without doing so. Telefónica argue that, except in a limited set of circumstances, the auction could not, otherwise, determine the correct winner and price and would also corrupt the round by round price discovery. Telefónica asserts that, in the event of Bidder exclusion, it would be necessary for the auctioneer to '*step back*' (potentially to the first round of the auction) and re-run each round which may have been impacted by the excluded Bidder's presence. Telefónica then suggests that ComReg should immediately notify all remaining Bidders of the exclusion of a Bidder and of how it will ensure that the exclusion does not influence the Auction outcome.

3.3.3 DotEcon's Assessment

3.3.3.1 Lot Application Form

3.69 With respect to H3GI's concerns regarding ComReg's discretion (as set out in paragraph 3.62), DotEcon state that it would consider it reasonable for ComReg to initially contact a Bidder to resolve a scenario where a Bidder's lot application form either exceeds a spectrum cap or if it included bids for Party-Specific lot category not available to that applicant. DotEcon however does state that it may be necessary to use one of the alternative approaches (including unilaterally reducing number of lots bid for so that the spectrum caps are not exceeded) in the event that a bidder is uncontactable or a resolution is not achieved.

3.3.3.2 Confidential Information and Bidder Behaviour

3.70 In their submissions on Document 11/75, both eircom Group and Telefónica raised concerns regarding ComReg's proposed rules regarding the date from which Bidders must cease communicating with one another.

3.71 In Chapter 3 of Document 12/51, DotEcon firstly considers that it is necessary to "*specify restrictions on the level and nature of communications between interested parties, applicants or bidders and their connected persons and insiders*" as a means of minimising the possibility of any restrictive practices,

sharing of confidential information or collusion occurring that would distort the outcome of the award process. DotEcon notes that such rules are common in spectrum auctions, and believes that it is necessary to apply such restrictions from or in advance of the submissions of applications through to the at least announcement of the final auction results in order to ensure the smooth running of the Award Process and an efficient outcome, likely reducing the threat of possible collusive behaviour or the entering of restrictive arrangements.

- 3.72 With respect to Telefónica's concerns regarding a potential delay between publication of the final IM and the start of the auction, DotEcon consider that there is no reason to build in to the information policy of the award process the possibility there will be a significant delay. DotEcon consider that, in the unlikely event of a significant delay due to circumstances outside ComReg's control, the specifics of the situation prevailing at that time (including the cause of such a delay and its expected magnitude) would dictate the necessary steps that should be taken with regard to the information policy. In some cases it might be appropriate to relax or suspend restrictions on communication in force on Bidders, or to delay their imposition. However, DotEcon notes that, by its very nature, such a circumstance would be unexpected and a fully contingent response to such eventualities cannot be fully provided for in the IM.
- 3.73 DotEcon noted that some of the comments received from respondents failed to distinguish clearly between normal business communications unrelated to the auction process and communication of Confidential Information that may affect behaviour within the auction, such as plans for future use of spectrum, bidding strategies, valuations, etc. DotEcon noted that the former should not normally be affected by restrictions on the latter. Therefore, the requirements in the Information Memorandum cannot be considered to be especially disruptive to day-to-day business for bidders. DotEcon stated that it is not feasible to provide an exhaustive list of cases which are directly or indirectly related to the Award Process and that may be considered to involve sharing of Confidential Information, collusion, the entering of restrictive agreements or disruption to the Award Process. DotEcon note that how bidders configure their business operations will affect the steps they may need to ensure compliance with these requirements. Therefore, bidders will need to make their own assessment of the detailed compliance steps they will need to take.
- 3.74 DotEcon notes that, whilst ComReg can provide further clarification of its information policy through the Q&A process following publication of the Final IM, the broad principles governing communication during the Auction process have already been clearly laid out in the draft IM. DotEcon does not consider it realistic

to expect ComReg to be able to respond to specific queries from Bidders on an ex ante basis to provide safe harbour for particular business activities. ComReg must always remain free to impose ex post sanctions on Bidders if they are subsequently found to have breached the Auction Rules.

- 3.75 eircom Group makes the argument that the rule on communications may bring communications to an abrupt end as parties are unaware of the publication date (and accordingly the start date for prohibition for discussion of Confidential Information which may affect bidders behaviour in the auction) of the Final IM in advance. DotEcon recognises that it is impractical for Interested Parties to cease all communications with other likely Bidders without notice, and that it would be beneficial to provide some advance notice. DotEcon considers that the most practical approach is for restrictions on communications to come into force after the publication of the Final IM and either on or prior to, the deadline for submission of application forms. On this basis, DotEcon considers that applying the rules regarding Confidential Information and bidding behaviour from 4 weeks prior to the deadline for submission of applications may provide a reasonable balance between allowing potential applicants time to bring discussions to a close, whilst also ensuring the necessary communication restrictions are applied sufficiently in advance of the deadline for submission of application forms. However, DotEcon notes that, under this approach, restrictions on communication between bidders would come into force prior to the deadline specified for ComReg to publish answers to further questions raised by respondents. Further this approach could cause problems for those wishing to enter a joint bidding group. DotEcon therefore recommends that such restrictions come into force for an Applicant at the point in time it submits its first (if it submits multiple) Application, and no later than the deadline for submission of applications.
- 3.76 DotEcon notes that a joint bidding partnership that became a Qualified Bidder would be treated as a single entity for the purpose of the auction rules and for communications purposes, and hence can communicate freely with one another during the restriction period, but not outside of the entity.
- 3.77 Regarding complaints about a Bidder's lack of knowledge of who it may share information with during the Award Process, DotEcon notes that, in line with its proposal, the auction rules would prohibit communication with any other Interested Party from the deadline for submission of applications to the end of the Award Process. Separately, the auction rules prohibit making public information relating to a party's participation or otherwise in the award process. Together, these rules mean that it would be a clear and a severe breach of the auction rules to share with any party, other than insiders notified to ComReg, information which

relates - either directly or indirectly - to their participation or otherwise in the auction process, the bidder's bid strategy or its intended use of the licences to be awarded. Therefore, bidders should participate under the assumption that this information should be kept confidential for the relevant period. DotEcon does not agree that the rules on communication are impractical on the basis that parties do not know who they are barred from communicating with, as it is clear that they are intended to prevent the disclosure of Confidential Information regarding the auction to any other party.

- 3.78 With regard to when the restriction on communication ends, DotEcon recommends that it applies until payment (of Reserve Price in full) is made for licences, citing the FCC as adopting the same policy. DotEcon state that it is only at this point when the auction process is truly complete and bidders can no longer be influenced by other participants regarding acceptance and payment of spectrum won. Therefore, DotEcon recommend the restriction on communication lasts until payment of reserve price fees.

3.3.4 ComReg's Final Position

3.3.4.1 Lot Application Form

- 3.79 Paragraph 3.21 of Document 11/75 listed three options available to ComReg at its discretion should a Lot Application Form³⁶ include Lots which exceed the spectrum caps or are within a Party-Specific Lot Category not available to the applicant. H3GI would prefer ComReg to initially contact a Bidder to resolve the scenario should this event occur. ComReg agree with DotEcon's advice that the first option which ComReg should take is to contact the Bidder to resolve the scenario. However, and in line with DotEcon's recommendation, ComReg believes that that it may be necessary to use one of the alternative approaches (including unilaterally reducing number of lots bid for so that the spectrum caps are not exceeded) in the event that a bidder is uncontactable or a resolution is not achieved. With this in mind, ComReg will not alter the text in Paragraph 3.21 of Document 11/75, as it wishes to maintain discretion regarding its actions should this event occur.

3.3.4.2 Bidder Declaration

- 3.80 ComReg does not wish to unnecessarily restrict parties from participating in the award process, to do so could be considered discriminatory. With this in mind, ComReg accepts that the conditions contained within the Lot Application Form in

36 Note: Lot Application Form in pdf format will be made available on ComReg's website

Annex 6 (most notably clauses A6.14 and A6.15) could prevent an Interested Party in examinership from participating in the Award Process. **[CONFIDENTIAL]**

- 3.81 ComReg will alter the Bidder Declaration so that Applicants are permitted to annex a disclosure schedule thereto as opposed to requiring that the Bidder Declaration be made on an unqualified basis. ComReg reserves the right to decide, on a case by case basis, whether an Applicant making any material disclosures would be permitted to participate in the Auction.
- 3.82 ComReg is of the view that this approach allows it to adopt a more proportionate and feasible approach where Applicants may need to make one or more disclosures that are unlikely to have a material effect on the Applicant's ability to pay licence fees, deploy services and make efficient use of spectrum.
- 3.83 In particular, ComReg may, but does not guarantee to, permit an Applicant in a restructuring process to participate in the Auction subject to additional conditions to be set by ComReg on a case by case basis on receipt of the relevant disclosures. In the case of a company in examination under the Companies (Amendment) Act 1990 ("the Act of 1990"), ComReg envisages that conditions of the following form might be appropriate:
1. ComReg is made a notice party to the proceedings or the Company undertakes to provide ComReg with copies of the petition papers, all reports of the examiner, all affidavits filed in the proceedings and all orders of the court in relation to the proceedings;
 2. the directors of the Bidder to certify that they have formed the view that it is in the best interests of the company and the creditors that the company bid in the auction;
 3. the examiner to provide a certificate or certificates to the effect that in his opinion, Bidding in the Auction is not likely to be to the detriment of the company or any interested party within the meaning of s7(5) of the Act of 1990 where the Bidding does not exceed a specified level, such certificate to be renewed at a new level if that becomes necessary in the course of the Auction;
 4. ComReg to have the right to make additional cash/deposit calls in respect of a company in an examinership process over and above those made on other participants in the Auction; and

5. ComReg to have the right, but not the obligation, to exclude the company from the auction should the court elect to decline to approve any scheme of arrangement and a receiver or a liquidator is appointed to the company.

3.3.4.3 Ownership Rules

- 3.84 ComReg agrees with H3GI's point that the term "*Irish Communications Providers*" is not appropriate terminology. Given that a prospective Bidder may have no operations in Ireland; this term should be neutral for non-discriminatory purposes. In this regard, ComReg has changed the term to instead read "*Communications Providers*", removing the reference to nationality. This modification has been incorporated in the Final IM.

3.3.4.4 Confidential information and Bidder behaviour

- 3.85 ComReg agrees with DotEcon that it is vital to "*specify restrictions on the level and nature of communications between interested parties, applicants or bidders and their connected persons and insiders*" in order to minimise the possibility of any restrictive practices, sharing of confidential information or collusion from occurring that would distort the outcome of the award process. ComReg is aware from research that such restrictions on communications are common in other spectrum auctions, and accord with DotEcon that they should begin no later than at the deadline date for submission of applications. This is ComReg's final position and has been implemented in the timeline (see Table 2).
- 3.86 With respect to Telefónica's concerns regarding a potential delay to the award process and the fact that this could cause restriction on communications for a considerable amount of time, ComReg considers that should an unlikely significant delay occur due to circumstances outside its control, the situation at that time would dictate the steps that would be taken. As recommended by DotEcon, ComReg has discretion within the final IM which allows it to relax or suspend restrictions on communications in some cases. ComReg agrees with DotEcon that it is not possible to prepare for an unexpected event and will deal with such an event in an open, transparent and non-discriminatory manner should one occur.
- 3.87 In relation to the type of information which is confidential and must be restricted, ComReg's view is the same as that of DotEcon, that is that normal business communications unrelated to the award process is permissible, however communication of information that may affect behaviour within the auction (e.g. plans for future use of spectrum, bidding strategies, valuations, etc) must be

restricted. With this distinction between the type of communications is permissible between Parties during the award process, ComReg considers that the requirements within the final IM cannot be considered majorly disruptive to normal day-to-day business communications. ComReg agrees with DotEcon that it is not practical to provide an exhaustive list of cases which are directly or indirectly related to the Award Process, and the prerogative is on bidders to take necessary measures to ensure compliance with the requirements as set out in the final IM. In this regard, ComReg accords with DotEcon's advice which states that ComReg cannot be expected to respond to specific queries on business activities on an ex ante basis, and that ComReg will remain free to impose ex post sanctions on Bidders if they are found to be non-compliant with the Auction Rules.

- 3.88 On foot of recommendations by eircom Group and DotEcon, ComReg accepts that it may be impractical for Interested Parties to cease communications with other likely Bidders without notice, and that providing notice would be beneficial. ComReg concurs with DotEcon's view that the most practical date for the commencement of restrictions on communication of confidential (award process related) information is from the time that an Applicant submits its first Application (as they can make multiple, with the last Application received being the only valid one for the competition), and no later than the deadline date for submission of applications. This gives Interested Parties sufficient advance notice of when the restriction comes into effect and it allows Interested Parties visibility of ComReg's published response to Questions submitted. Also, ComReg's position is that the cessation of the restriction should be the end of the Award Process at which point in time reserve price for Lots will have been paid and bidders can no longer be influenced by other participants regarding acceptance and payment of spectrum won. While Winning Bidders may wish to negotiate with other Winning Bidders in the Negotiation Phase of the Assignment Stage, confidentiality regarding the outcome of the Award Process must be maintained until ComReg makes a public announcement at the End of the Award Process as detailed in subsection 4.6. This is ComReg's final position.
- 3.89 For clarification, joint bidders will be treated as a single entity for the purpose of the award process, and can therefore freely communicate confidential information related to the award process between each other.
- 3.90 ComReg concurs with DotEcon's analysis as to why bidders must not publicise their participation in the auction, for the reasons outlined in paragraph 3.77. This means that it would be a clear and a severe breach of the auction rules for a Qualified Bidder to share with any party, other than insiders notified to ComReg,

information which relates - either directly or indirectly - to their participation or otherwise in the auction process, the bidder's bid strategy or its intended use of the licences to be awarded.

3.4 Qualification Stage

3.4.1 ComReg's Position in Document 11/75

3.91 Section 3.4 of Document 11/75 set out in detail the structure of the Qualification Stage, which entails;

- The Process for approval of Applications (detailed in Section 3.4.1 of Document 11/75);
- The Assessment of Applications (detailed in Section 3.4.2 of Document 11/75); and
- How the Award Process will progress in the different possible scenarios (detailed in Section 3.4.3 of Document 11/75).

3.4.2 ComReg's Final Position

3.92 No respondents provided specific comments on Section 3.4 in submissions to Document 11/75. Therefore, ComReg final position is to maintain the text from Document 11/75 in the final IM.

3.5 Main Stage

3.5.1 ComReg's Position in Document 11/75

3.93 Section 3.5 of Document 11/75 outlined the key features of the Main Stage. The specific details of the Main Stage were presented in Section 4 of Document 11/75. The Main Stage uses a CCA which consists of;

- one or more Primary Bid Rounds, with the value of the Bid determined by prevailing Round prices for the Lots included, and Bids are subject to activity rules; followed by
- a Supplementary Bid Round where a Bidder can make a number of Bids for different Lots, however Bid amounts are restricted based on previous Bids made in the Primary Bid Rounds, This restriction in conjunction with the activity rule ensures Bidders cannot conceal their demand for Lots until the later rounds.

3.94 Section 3.5.2 outlined how the Winning Bidders are determined in the Main Stage, and how the Base Price is determined for each Bidder, using an opportunity cost pricing methodology.

3.5.2 ComReg's Final Position

3.95 No respondents provided specific comments on Section 3.5 in their submissions to Document 11/75. Comments were received in respect of the more detailed intricacies of Primary Bid Round, Supplementary Bid Round and Winner and Price determination. ComReg's response to same can be found in Section 4 of this Document. Therefore, ComReg final position is to maintain the text from Document 11/75 in the final IM.

3.6 Assignment Stage

3.6.1 ComReg's position in Document 11/75

3.96 Section 3.6 of Document 11/75 detailed the design of the Assignment Stage. This Section described how Winning Bidders from the Main Stage would be assigned contiguous spectrum within a band in all scenarios. Any unallocated spectrum in a band would also be contiguous. Whilst spectrum would in all cases be contiguous within a spectrum band, continuous spectrum across Time Slices may not be guaranteed. The Assignment Stage uses an auction to determine Winning Bidders specific spectrum assignments, and in the case that there is only one Winning Bidder in a spectrum band it can select its location in that band³⁷.

3.97 The Assignment Round, as detailed in Section 3.6.1 of Document 11/75, determines the specific frequencies assigned to each Winning Bidder in the Award Process as well as any existing GSM Licensees in the 900 MHz and 1800 MHz bands who maintain GSM spectrum for all or part of Time Slice 1. For each particular spectrum band where an Assignment Stage is required, ComReg would determine the feasible assignments of frequencies for each Winning Bidder which ensures contiguous assignments for each Winning Bidder in a spectrum band and ensures any unassigned spectrum forms a single contiguous block of frequencies. The Assignment Stage consists of a single round of sealed bidding with Bids made separately for each Band.

3.98 Each spectrum band included in the Assignment Round will have a separate determination of winning Assignment Stage Bids for specific frequency assignments within that band. The Winning Combination of Bids in the

Assignment Stage would be the combination of valid Assignment Stage Bids with the highest total value of Bid amounts³⁸, and each Winning Assignment Stage Bidder would pay the opportunity cost price of its Winning Assignment Stage Bid.

3.6.2 Views of Respondents

3.99 Section 4.5.3 of Document 12/25 details the submissions from Telefónica and H3GI on the Assignment Stage. Telefónica considers that there are more possible scenarios where compensation could be due, whereas H3GI supported ComReg's proposal not to compensate relocations between Time Slices and that information regarding relocation rebates would be published on ComReg's website. H3GI argued that it is not appropriate to use the eircom WACC as an industry standard.

3.100 ComReg received a late submission³⁹ from H3GI on Network Sharing Arrangement's (NSA's) and how they should be incorporated in the Assignment Stage. Details of H3GI's submission are contained in Section 4.5.4 of Document 12/25. H3GI and its consultants' recommendation was that ComReg adopt Vodafone's previous proposal (which included a negotiation stage after the conclusion of the Assignment Stage. As detailed in Section 4.5.2 of Document 12/25) with one modification being that the bidders can decide on the prices to be paid if there is a negotiated outcome.

3.6.3 ComReg's position in Document 12/25

3.101 Section 4.5.5 to 4.5.7 of Document 12/25 outlined both ComReg's and DotEcon's analysis and position on the Assignment Stage.

3.102 ComReg noted that there were no dissenting views on the principle of compensation nor the level of compensation proposed and therefore maintained the application of compensation.

3.103 DotEcon considered all submissions, and determined that there are benefits from allowing NSA operators express preferences for contiguous spectrum. In this regard, DotEcon sees the merit in Vodafone's approach which includes a 'negotiation stage'. DotEcon considered it necessary for all parties to agree on the final outcome in order to avoid negative consequences, and recommended that the negotiation stage⁴⁰ is carried out after the Assignment Round. DotEcon

recommended a specific period be allowed following the Assignment Round for Winning Bidders to negotiate reorganisation of the band and notify ComReg of any agreement. Further to this, DotEcon recommended an additional negotiation phase prior to the granting of licences, which would allow some or all of the Winning Bidders come to an agreement and swap frequencies and make any side-payments as agreed, with unaffected winners from the Assignment Stage having no veto over any such agreement.

3.104 ComReg appreciated the specific example from Telefónica regarding relocation scenarios which should be considered for compensation, and ComReg stated that it would provide compensation to incumbents if the events presented in Section 4.115 of Document 11/60 occur. ComReg also stated that it would compensate an incumbent for other scenarios if it could demonstrate to ComReg's satisfaction that it incurred these costs due to the Assignment Round and would not have incurred these costs at some other point in time. Section 4.5.7 of Document 12/25 outlines ComReg's Final Decision on relocation rebates.

3.105 Having considered submissions and DotEcon's recommendations, ComReg considered that the Vodafone proposal with DotEcon's recommended modifications "*facilitate[s] the attainment of the efficiency benefits of adjacent spectrum assignments for NSA partners in a manner not inconsistent with ComReg's other statutory objectives and duties*". In this regard, ComReg decided to alter its previous Assignment Stage proposal.

3.106 Section 4.5.7 of Document 12/25 presents ComReg's Final Position on the Full Assignment Round and the mechanics of how it will operate. Briefly, the Full Assignment Round is as follows;

- It will include all Lots in each of the spectrum bands in the Award Process (800 MHz, 900 MHz and 1800 MHz bands);
- Winning Bids, Assignment Plan and additional prices to be paid as determined in the Assignment Stage will be release to successful bidders in a specific band to form the starting point for negotiations with each other;
- Successful bidders within a spectrum are allowed 2 weeks (runs concurrently with 2 weeks allowed for development of transitional plan) at the end of the Assignment Stage to reach unanimous agreement and notify ComReg of any reorganisation of the band;

- If there is unanimous agreement between successful bidders in a specific band and Time Slice, ComReg will adopt the plan agreed; otherwise ComReg will implement the Assignment Stage generated outcome;
- Two or more agreeing Bidders will at this point be allowed swap assignments between them providing it does not affect other successful Bidders; and
- In all cases, the additional Assignment Round fees payable by successful Bidders will be those as determined in the Assignment Stage (using a single sealed bid, with opportunity cost pricing methodology).

3.6.4 Views of Respondents to Document 12/25

3.107 In a letter⁴¹ to ComReg, H3GI reiterated its preference for ComReg to adopt Copenhagen Economics recommended Assignment Stage proposal (as presented in paragraph 3.100).

3.6.5 ComReg's final position

3.108 With respect to H3GI's submission (as presented in Section 3.6.4), ComReg notes that this material was previously considered in Document 12/25 (Section 4.5.6), and since no new arguments were presented, ComReg refers readers to Document 12/25 regarding its justification for not amending its approach as requested by H3GI.

3.109 ComReg considered all submissions made in response to Document 11/75 in relation to the Assignment Stage in reaching its decision on the matter as set out in its Decision Document D04/12 and accordingly, those submissions are not treated further here. In line with ComReg's position as set out in Document 12/25, the final Information Memorandum has been amended to acknowledge certain minor modifications to the Assignment Stage, which includes the addition of 'negotiation stage' which facilitates reorganisation of the Assignment plan from successful Bidders and allows successful Bidders swap spectrum assignments so long as it does not affect other successful Bidders.

3.7 Notification and Grant Stage

3.7.1 ComReg's Position in Document 11/75

3.110 Section 3.7 of Document 11/75 outlines the process. The results of the Award Process would be announced to all Bidders, which would include the identity of Winning Bidders and the frequency ranges awarded to each, the frequency ranges retained for GSM in the first Time Slice (or part thereof) where applicable and the Upfront fee and additional Assignment Round fees to be paid by each Winning Bidder. Each Winner will be notified of the Lots it won in the Award Process.

3.111 Section 3.7 outlines in detail the steps that taken by ComReg to notify Winning Bidders and the process ComReg would enact to issue Preparatory and Liberalised Licences, as well as the necessary steps that a Winning Bidder must take to satisfy stipulated conditions and acquire its Liberalised Licence.

3.7.2 ComReg's Position in Document 12/25

3.112 ComReg did not make any specific changes to its position on the Notification and Grant Stage in Document 12/25. However, as detailed in Section 5.5.3.2, ComReg decided that it would not include performance guarantees in respect of coverage and roll-out, and quality of service, licence conditions on Liberalise Licences.

3.7.3 ComReg's Final Position

3.113 No comments were received on this matter. ComReg final position is to maintain the text from Document 11/75 in the final IM, with the removal of the proposed Performance Guarantees requirement for Winning Bidders.

3.8 Transition Rules

3.8.1 ComReg's Position in Document 11/75

3.114 Section 3.8 of Document 11/75 set out ComReg's proposals regarding transitional rules for the 900 MHz and 1800 MHz bands. Once all Winning Bidder and Existing GSM Licensees have been notified of the outcome of the Assignment Stage, Existing GSM Licensees would be allowed 2 weeks to formulate and submit a Relocation Project Proposal for the 900 MHz and 1800 MHz bands.

3.115 ComReg envisaged that this Relocation Project Proposal would address each of the matters as presented in paragraph 3.131 of Document 11/75, which includes,

- identification and order of relocation;
- setting of milestones;
- a mechanism to monitor compliance; and
- attribution and acceptance of liability for liquidated damages payable by Existing GSM Licensee(s) to ComReg in the event that it does not comply with the milestones within the Relocation Project Proposal.

3.116 ComReg would consult on the Relocation Project Proposal with Winning Bidders and Existing GSM Licensees on receipt with a view to finalising it.

3.117 Should Existing GSM Licensees fail to agree and/or submit a Relocation Project Plan within the 2 week period, ComReg would formulate the Relocation Project Plan following consultation with Winning Bidders and Existing GSM Licensees. By submission of Applications to the Award Process, Interested Parties are agreeing to be bound by the finalised Relocation Project Plan. The finalised Relocation Project Plan will be published on ComReg's website.

3.8.2 Views of Respondents

3.118 Three respondents (eircom Group, H3GI and Vodafone) provided comments on the Transition Rules in submissions to Document 11/75.

3.119 Eircom Group disagreed that participation in the auction should be subject to agreeing in advance to be bound by the finalised Relocation Project Plan.

3.120 The remaining comments can be separated to three different categories, being comments on:

- Transitional Periods;
- Transitional Activities; and
- Liquidated Damages.

3.8.2.1 Transitional Periods

3.121 Eircom Group considers the two week period for Existing GSM Licensees to reach agreement on a project plan does not appear to be sufficient, and opines

that ComReg should retain the right to extend the two week period by a short period.

3.122 H3GI was concerned that the draft Information Memorandum did not state a timeframe for when the project plan for relocation activities would be established and published.

3.123 Eircom Group and H3GI's comments are set out in more detail in Section 6.3 of Document 12/25.

3.8.2.2 Transitional Activities

3.124 H3GI provided comments on the Transitional Activities in its submission to Document 11/75. These are detailed in Section 6.3 of Document 12/25, including:

- H3GI was concerned that ComReg's only involvement in the Relocation Project Proposal would occur if there was no agreement between the Existing GSM Licensees in the 2 week period;
- H3GI questioned how ComReg proposed to safeguard discussions between Existing GSM Licensees leading to "significant distortion of competition post-the award process", and ComReg should provide details on the relevant safeguards;
- Relocation and retuning should not take as long as claimed by incumbents; and
- Reserving Block A in the 900 MHz band for a new band entrant across both Time Slices would best incentivise early transition (as presented in Section 7.3.1 in Document 12/25).

3.8.2.3 Liquidated Damages

3.125 H3GI and Vodafone provided comments on ComReg's Liquidated Damages proposal in respect of Transition, and these are presented in Section 6.2.3.2 of Document 12/25.

3.8.3 ComReg's Position in Document 12/25

3.8.3.1 Transitional Periods

3.126 ComReg addressed H3GI and eircom Group's concerns regarding Transitional Periods in Section 6.2.5.2 of Document 12/25. In this section of Document 12/25, ComReg's position included that:

- A retuning project plan should be submitted two weeks after the end of the main stage of the auction (which is also the deadline for submission of relocation project plan); and
- ComReg reserves the right to extend the time period for the formulation of a relocation project plan or retuning project plan, if required.

3.8.3.2 Transitional Activities

3.127 ComReg addressed H3GI's concerns (as detailed in paragraph 3.124) regarding Transitional Activities in Sections 6.2.5.1, 6.2.5.2 and Section 7.5.1F of Document 12/25. ComReg's analysis included that;

- Only existing GSM Licensees are required to carry out relocation and retuning activities and therefore should be given opportunity to generate relocation project plan, which winning bidders can comment on, and ComReg retains the right to make a final and binding decision on all matters associated with the relocation project plan;
- There is a deadline of 31 January 2013 for 'relocation' activities for the 900 MHz band and 1800 MHz band, although ComReg reserves its right to amend the 1800 MHz deadline as necessary; and
- It would be inappropriate for ComReg to reserve Block A in the 900 MHz band and the unassigned 1800 MHz spectrum.

3.8.3.3 Liquidated Damages

3.128 ComReg addressed Vodafone and H3GI's concerns regarding Liquidated Damages in respect of Transitional Activities in Sections 6.2.5.2 and Section 6.3.5 of Document 12/25. ComReg's analysis included;

- ComReg is obliged under its statutory functions, objectives and duties to ensure that the terms and conditions of the transition project plan are fair and reasonable; and
- The main elements of the transition project plan are set out in Chapter 6 of Document 12/25, with the remaining elements including setting of interim milestones are a matter for interested and affected parties when planning the transition project plan.

3.8.4 Submissions Received Since Document 12/25

3.129 Three respondents (eircom Group, H3GI and Vodafone) provided comments on the Transition Rules in submissions received by ComReg since Document 12/25 was published.

3.8.4.1 Transitional Periods

3.130 Like eircom Group, Vodafone is of the view⁴² that the two week period for Existing GSM Licensees to reach agreement on a transition plan does not appear to be sufficient. Vodafone also stated that in the event of Scenario 2 occurring (retuning), there would be an inevitable delay for the start of new licences in Time Slice 1, particularly in the 900 MHz band. Vodafone stated that a minimum of 6 weeks should be allowed to generate a transition plan. Vodafone also urged ComReg to provide a “*firm commitment at this stage*” to extend the Interim 900 MHz licences should Scenario 2 (retuning) occur as a result of the award process.

3.131 H3GI reiterated⁴³ its concern (also detailed in paragraph 3.122) that the draft Information Memorandum did not state a timeframe for when the transition plan for relocation activities would be established and published.

3.132 Telefónica believes⁴⁴ the earliest possible date for conclusion of the assignment process is in the third quarter of 2012. Even if all applicants are assigned sufficient spectrum to meet their requirements, the details of the specific assignments for each applicant would not be known at this point and might require significant time for re-arrangement of assignments.

3.8.4.2 Transitional Activities

3.133 Vodafone welcomes⁴⁵ ComReg’s decision regarding its flexible approach to potential transitional issues post auction, particularly in the scenario where an existing GSM Licensee has to retune its 900 MHz spectrum. Vodafone also stated that it has strong incentives to expedite completion of transitional activities and that ComReg can be assured of its cooperation in formulating a viable transition plan.

⁴² Vodafone letter submitted to ComReg on 11 April 2012, this letter is available in ComReg Document 12/49

⁴³ H3GI letter submitted to ComReg on 5 April 2012, this letter is available in ComReg Document 12/49

⁴⁴ Telefónica letter submitted to ComReg on 13 April 2012, this letter is available in ComReg Document 12/49

⁴⁵ Vodafone letter submitted to ComReg on 11 April 2012, this letter is available in ComReg Document 12/49

3.134 H3GI⁴⁶ is concerned that Existing GSM Licensees “*will delay transitional activities to their unfair competitive advantage*”. In this regard, H3GI requested ComReg to;

1. Clarify in the Final IM the tools it has to deal with an operators failure to promptly complete its transitional activities, suggesting one such tool as being the withdrawal of a licence offer;
2. Include audit rights in the information gathering section in the Final IM;
3. Select a “senior and experienced ComReg manager” to project manage transitional activities; and
4. Have weekly project meetings once the transition plan is completed.

3.135 H3GI also state that ComReg's proposals regarding the finalising of the transitional plan are unclear, and points to an apparent contradiction in Document 12/25 regarding when discussions take place (after the Main Stage or after the Assignment and Negotiation Stage). H3GI would be concerned if GSM operators were to engage in discussions during the auction.

3.8.5 ComReg's Final Position

3.136 ComReg has given due regard to material submitted on this matter since the publication of Document 12/25.

3.8.5.1 Transitional Periods

3.137 Regarding Vodafone and eircom Group's concerns that the two week period for Existing GSM Licensees to reach agreement on a transition plan is insufficient, ComReg is of the view that such a period of time is sufficient, but could be difficult to achieve if this period ran concurrently with the "negotiation stage" relating to Assignments. The provision of a period like the 6 weeks suggested could extend the amount of time it takes to complete transitioning, which could compromise the deadline date for transition activities. With regards to Vodafone's point that should Scenario 2 (retuning) occur there would be an inevitable delay for new licences in Time Slice 1, this matter has been adequately addressed in Document 12/25, where ComReg states that such retuning can only occur to Telefónica and Vodafone in Time Slice 1 for the 900 MHz band, ComReg does not believe it is a likely event (and the auction has been designed to minimise the negative effects of such an outcome), and Bidders have the potential in the Assignment Stage to obtain spectrum blocks that will not be impacted.

⁴⁶ H3GI letter submitted to ComReg on 5 April 2012, this letter is available in ComReg Document 12/49

- 3.138 As it may be the case that successful bidders do not know their specific spectrum assignments until 2 weeks after the Assignment Round (i.e. after the "negotiation stage"), ComReg is of the view that it could be difficult for the Transitional Project Proposal to be generated and completed in the same two weeks. In this regard, ComReg has allowed a total of 4 weeks from completion of the Assignment Round for the Transition Project Proposal to be submitted to ComReg. Note that the first two weeks of this four week period overlaps with the "negotiation stage".
- 3.139 Regarding Vodafone's request for a "*firm commitment at this stage*" to extend the Interim 900 MHz licences should Scenario 2 (retuning) occur as a result of the award process, ComReg cannot provide such commitment at this time. ComReg will evaluate the outcome of the award process, and will deal appropriately with prevailing matters at that time.
- 3.140 Regarding H3GI's concern that the draft IM didn't state a timeframe for when transition plan and relocation activities will be published, ComReg will accordingly publish such information publically at a suitable time after the award process, with ComReg seeing the benefit of establishing and publishing this soonest.
- 3.141 Regarding Telefónica's statement that there may be requirement for significant time for re-arrangement of assignments, ComReg views the period assigned as sufficient.

3.8.5.2 Transitional Activities

- 3.142 Regarding H3GI's concerns and requests (see paragraph 3.134), ComReg is of the view that it is taking appropriate steps to ensure that Existing GSM Licensees do not delay transitional activities. In this regard, ComReg considers its proposals regarding formulation of project plans and the enforcement of liquidated damages if necessary are adequate tools to ensure that transitional activities are completed as promptly as possible.
- 3.143 In respect of H3GI's concern that Document 12.25 seems to suggest that GSM operators could engage in Assignment Stage and Negotiation Stage discussions during the auction, ComReg has clarified that this cannot happen.

Chapter 4

4 The Auction Rules

4.1 Chapter 4 of Document 11/75 set out a description of ComReg's draft Auction Rules intended to be employed in the Award Process, the rationale for same and key features of the Electronic Auction System ("EAS") intended to implement some of the Auction Rules and assist Bidders in placing Bids in conformity with the Auction Rules.

4.2 Having regard to:

- ComReg's proposals in Document 11/75;
- respondents' views on Chapter 4 in Document 11/75;
- DotEcon's assessment and response to same;
- recognising that ComReg has already made a number of decisions in relation to the Auction Rules in ComReg's decision Document D04/12⁴⁷ and noting that further details remain to be set out in relation to the Auction Rules; and
- the submissions received since the publication of Document 12/25;

this chapter sets out ComReg's final position on the Auction Rules⁴⁸ to be incorporated into the Information Memorandum for this Award Process.

Interested parties should note that the Information Memorandum (Document 12/52) for this Award Process has been published alongside this Response to Consultation document, and this Information Memorandum sets out the Auction Rules for this Award Process, subject to its reserved rights.

⁴⁷ As set out in Document 12/25.

⁴⁸ Interested Parties should note that ComReg reserves the right to make amendments to the Auction Rules after the finalisation of the Information Memorandum (ComReg 12/52) to correct any errors therein, or to further clarify matters, whether identified by ComReg, its consultants or Interested Parties, where such amendments are necessary or appropriate to ensure that the Auction Rules and the EAS operate in the manner intended by ComReg, as set out in the Information Memorandum. ComReg will promptly bring any such amendments to the attention of interested parties. Interested Parties are reminded that they are obliged to bring any errors in the operation of the EAS to ComReg's attention promptly as set out in the Information Memorandum.

- 4.3 Where summaries are provided below, whether of ComReg's previous positions, respondents' views, or DotEcon's expert reports, reference should be made to the original text⁴⁹ for the definitive version thereof.
- 4.4 In particular, this Chapter considers and addresses the submissions received that relate to the Auction Rules in the following principal areas⁵⁰:
- The running of the Auction;
 - Information Flow and Policy
 - Spectrum Caps;
 - The Primary Rounds of the Main Stage;
 - The Supplementary Rounds of the Main Stage;
 - The Activity Rules;
 - Winner determination and pricing method; and
 - The end of the Auction;

4.1 Running of the Auction

- 4.5 In Section 4.1 of Document 11/75, ComReg set out an overview of the key elements proposed to give effect to the running of the award process including inter alia that there would be:
- An EAS for submitting Bids, including inter alia technical requirements for bidders to use the EAS software and information on the key features incorporated in its operation, including features which simplify the bidding process such as the automatic calculation of any necessary 'chain bids'⁵¹;
 - Information made available to Bidders prior to the start of the Auction including the round price for each Lot category in the first Primary Bid Round,

⁴⁹ To render this document as useful as possible to the majority of readers, references to page numbers of respondents' submissions are to the page numbers in the non-confidential versions of those submissions as published by ComReg.

⁵⁰ While Chapter 4 of the draft Information Memorandum also included details on the Assignment Stage), all assignment stage issues (including issues on the 'Winner determination and pricing method for additional price') have been considered and addressed in Chapter 3 of this Response to Consultation document.

⁵¹ Note, in line with section 2.2.1 of DotEcon's Issues Report (Document 12/51), the term 'binding supplementary bid' is no longer used in this document. Instead the term 'chain bid' is used.

the provisional round schedule and the number of extension rights to be granted to each Bidder for the Primary Bid Rounds;

- Bid submission rules, including rules in relation to the form of and requirements for transmission of same, and on the onus of responsibility for submitting Bids;
- Rules in relation to communicating with ComReg during the Auction; and
- Exceptional circumstances.

4.6 Save for exceptional circumstances which are discussed below, ComReg notes that:

- no views were received on the practical aspects of the EAS, so therefore this issue is not discussed further in this document;
- issues related to the information flow between ComReg and the Bidders is discussed in section 4.2 of this document. ComReg's position on these matters is set out that section; and
- matters relating to the detailed rules surrounding the main stage of the auction as discussed later in this chapter, and ComReg's position on these matters is set out these sections.

4.1.1 Bidder exclusion in the event of exceptional circumstances

4.1.1.1 ComReg position in Document 11/75

4.7 Section 4.1 of Document 11/75 also set out proposed options available to ComReg in the case of exceptional circumstances (including particular actions ComReg may take at its discretion during any stage of the Auction). In this regard, ComReg noted that in the event that a bidder is excluded from the auction and some, or all, of its previous Bids were deemed invalid, it would not typically expect to use any of its 'exceptional powers' to modify the auction outcome or any intermediate stage of the auction insofar as it affected other Bidders.⁵² The following sets out ComReg's consideration of Bidder exclusion in the event of exceptional circumstances.

⁵² See also paragraphs 4.23 and 3.73 of Document 11/75.

4.1.1.2 Summary of Respondent's views

4.8 Two respondents, Telefónica and H3GI provided submissions in relation to ComReg's approach in respect of Bidder exclusion in the event of exceptional circumstances.

4.9 Telefónica claimed that in the event that a Bidder is excluded from the Auction when Bids have already been made it would be necessary to remove their Bids entirely from the Auction as it would be "*fundamentally erroneous to continue the Auction without removing their bids*".⁵³ Further at page 9 of its submission to Document 11/75, Telefónica stated that in this situation "*...this would cause the winner and price determination process to deliver the wrong result, and would undermine the whole auction process*".

4.10 Telefónica also stated therein that:

- "*In most cases, the removal of a Bidder would require the auctioneer to 'step back' perhaps to the first round of the Auction and re-run each round that might have been impacted by their presence*";
- "*ComReg should notify all continuing Bidders immediately on exclusion of a Bidder, and of the action ComReg intends to take in order to ensure their presence does not influence the Auction outcome*"; and
- "*If ComReg was to attempt to continue the Auction without taking steps to cleanse the bidding record, this would likely lead to a legal challenge either during or after the process and would ultimately lead to greater overall delay*".

4.11 At page 18 of its submission to Document 11/75, H3GI also called for some additional clarity in relation to the issue of Bidder exclusion and the proposed remedies available to ComReg in the event of exceptional circumstances occurring. H3GI stated therein that "*ComReg should, in the interests of clarity and fairness, provide further guidance on the exercise of its discretion in the various circumstances noted*". In addition, H3GI sought clarification as to under what 'circumstances' would it be appropriate for ComReg to end the Primary Bid Rounds early and proceed to the Supplementary Bids Round.

⁵³ See also page 19 of Telefónica's submission to Document 11/75.

4.1.1.3 DotEcon's assessment

4.12 In Section 7.1.2 of Document 12/51, DotEcon sets out its assessment and consideration of Telefónica's and H3GI's views on Bidder exclusion in the event of exceptional circumstances and state that:

- *“The basis for intervention by ComReg and whether or not bids are excluded from the auction (and possible re-running of some previous rounds) is likely to depend on the reason for exclusion and the extent to which the current state of the auction will affect the remaining bidders. As it is not appropriate to provide an exhaustive list of when ComReg might have cause to use its exceptional powers in the case of a bidder being excluded, ComReg should retain full discretion in this regard.”*

4.13 While noting ComReg's discretion to make a decision on how to proceed in the case where a Bidder is excluded, DotEcon further note that:

- *“It is important to distinguish between excluding some or all of a bidder's bids from the determination of winning bids and base prices on the one hand, and revising the current state of a primary round to retrospectively reflect the exclusion of a Bidder. If, for example, a Bidder were excluded for gross breach of the auction rules in the course of the primary rounds, we would typically expect no further primary bids to be possible and for the bidder's bids to be disregarded for winner determination and pricing; however, the current state of the auction in terms of the round prices would typically not be revised.*
- *In the case where a bidder is excluded during the open rounds of the auction, we do not consider that leaving the current round prices unaltered would corrupt round by round price discovery as suggested by Telefonica. Bidders will have been making all bidding decisions based on prevailing round prices at that time. If bidders are willing to pay at least the prevailing round price regardless of the presence or absence of “ghost bids”. If bidders had been placing bids in line with their valuations up to the point of exclusion of another bidder then we do not consider that these rounds would need to be re-run as these valuations and subsequent bids will be included and accounted for in determining the results of the auction. Moreover, it would be impossible to wipe out the information that had already been revealed by the open rounds run so far, so simply restarting the auction does not mean that the effect of excluding a bidder would be entirely obliterated.*

- *In the case where a bidder is excluded during the open rounds of the auction, the auction may go from a state of excess demand for lots to one of excess supply for at least one category of lot, implying unsold lots. In this case, if ComReg were not to re-run any particular rounds in the auction, there are factors that mitigate against bidders still in the auction being penalised on account of the excluded bidder's behaviour. For example, subject to constraints imposed by spectrum caps and initial eligibility, bidders in the auction may still be awarded lots in excess supply at the end of the primary bid rounds based on their bids in the supplementary bids round.*
- *In relation to the issues raised by H3GI we first note that it is not possible to provide an exhaustive list of possible events in the auction that would result in ComReg using its exceptional powers. In the specific case of ComReg's discretion to end the primary bid rounds early (that is, while there is still excess demand in one or more lot categories) we would note that this would only occur if appropriate and proportional to the exceptional circumstances which would have arisen and if such an approach would further the objectives of the award process and ComReg's objectives. As noted in the draft IM, ComReg will determine whether a situation of exceptional circumstances had arisen before using its discretion to intervene in the auction process. Exceptional circumstances are by definition impossible to predict. However, as a simple example, exceptional circumstances could include widespread technical failure or material concern about collusion amongst bidders."*

4.1.1.4 ComReg's assessment

- 4.14 ComReg notes that two respondents, H3GI and Telefónica, submitted views on ComReg's proposed approach in respect of bidder exclusion in the event of exceptional circumstances, and that these views have been considered by DotEcon in section 7.1 of DotEcon's Report, Document 12/51.
- 4.15 In relation to H3GI's comment for additional clarity and further guidance to be provided on ComReg's discretion in various circumstances, ComReg notes that exceptional circumstances are by their very nature exceptional and therefore not possible to predict or specify before hand. As such it is not possible for ComReg to identify *a priori* an exhaustive list of the exceptional circumstances that might arise or provide guidance on ComReg's discretion to dealing with such circumstances, as the specifics of any such circumstances will only be known as and when they arises. Given this, ComReg believes that it is not possible to

provide any further clarity at this stage, aside from stating that any approach adopted by ComReg would be in line with its statutory objectives as set out in Annex 1 of Document 12/25.

- 4.16 In relation to Telefónica's comments, and in particular its views that ComReg may have to 'step back' the auction to the first round in the event of bidder exclusion or that would be erroneous to continue the Auction, ComReg believes that it is not possible at this stage to specify its exact course of action as this would depend on the specific of the circumstance.

4.1.1.5 ComReg's final position in the Information Memorandum

- 4.17 Given the above, ComReg believes that it is not possible at this stage to specify its exact approach to dealing with any exceptional circumstance in relation to a bidder exclusion circumstance. ComReg is therefore of the view that it is appropriate that it retains its discretion on the circumstances that may lead to Bidders and Bids being excluded from the auction and the possible re-running of some previous rounds. ComReg notes that this final position is the same as that proposed in Document 11/75.

4.2 Information Flow and Policy

- 4.18 ComReg has considered and consulted on ways in which the risk of collusive (including tacitly collusive) behaviour in the Auction could be minimised. In this regard, ComReg has proposed a strict information policy, which governs communication and exchange of information during the Award Process for the following reasons:
- to restrict the ability of Bidders to communicate information relevant to valuations and bid strategy; and
 - limit the ability of bidders to act collusively based on what they observe other bidders doing.
- 4.19 In Document 11/75 ComReg set out the features of the proposed information policy, which included the following:
- Restrictions on communication between Bidders from the publication of the Information Memorandum and until ComReg announces the outcome of the award process;⁵⁴

⁵⁴ ComReg's consideration of this matter is set out in section 3.3 of this Document

- Specified information only to be revealed following qualification stage;
- Specified information only to be made available to Bidders prior to the start of the Auction;
- Specified information only available before the start of the first Primary Bid Round;
- Specified information only to be made available at end of each Primary Bid Round;
- Specified information only to be made available upon scheduling of a further Primary Bid Round;
- Specified information only to be provided at the end of the last Primary Bid Round and prior to the start of the Supplementary Bids Round;
- Specified information to be disclosed at the end of the main stage of the auction; and
- Specified information only to be released to Bidders at the end of the Auction, that is, once ComReg has determined the winning bids for lots in all lot categories and the Additional Prices for the Assignment Stage, the result of the Auction will be announced to all Bidders but Bids will not be published.

4.20 In this section ComReg considers the information policy as it relates to running the Auction, and DotEcon's and respondents' views on same.

4.2.1 Information made available to Bidders following the qualification stage and assessment of Bidders

4.2.1.1 ComReg's position in Document 11/75

4.21 In Document 11/75 ComReg proposed that once the deadline for applications passed, ComReg would evaluate applications and inform each applicant whether it has become a qualified Bidder and would thus be eligible to bid for Lots in the award process.

4.22 ComReg made it clear that it did not intend to inform qualified Bidders about the identity or number of other qualified Bidders, or the initial Eligibility to bid of other qualified Bidders. In addition, ComReg proposed that it would not reveal any information about bidders who were unsuccessful at the qualification stage.

4.2.1.2 Summary of Respondents views

- 4.23 Telefónica and eircom Group provided views in response to ComReg’s proposals to withhold the identity of qualified Bidders. In summary, these respondents considered this rule to be overly restrictive, could create an additional administrative burden for ComReg and could distort the ability of Bidders to gather the necessary information for an efficient outcome.
- 4.24 At page 7 of its submission to Document 11/75, eircom Group claims that the rule “...makes no sense and will be impossible to enforce since prospective bidders will not know with whom they are prohibited from communicating with”.⁵⁵
- 4.25 Separately, Telefónica commented that the proposal to restrict bidder identities offers no “*obvious benefits*” that cannot be achieved through restrictions on bid data revelation. However, Telefónica submitted that it does introduce real costs, providing a number of reasons to support its view including:
- *Reduced scope for price discovery* - Without knowing the number and identity of bidders, it claims it becomes much harder to interpret information about prices and aggregate demand revealed in the auction. As a result, it claims bidders may be deprived of information they would otherwise have used to confirm or revise their valuations and bid strategy. In a common value setting, such as a spectrum auction, this makes it more likely that bidders submit misguided bids resulting in outcomes that are inefficient, both for bidders and ultimately for Irish society.
 - *Information asymmetries between bidders* – Telefónica claims that participation in the award by some bidders is more predictable than others. It claims that this is uniquely the case here as existing operators must participate in order to maintain spectrum for existing networks. It submits that Bidders whose participation is uncertain may gain an advantage over those who will be predictably present, because they can, in Telefónica’s view, more easily interpret demand data. Telefónica notes that the impact and extent of such asymmetries are difficult to predict, but their existence reduces the likelihood of a level playing field across bidders.
 - *Undue burden on ComReg* – Telefónica claims that without a list of qualified bidders, it would be impossible for participants to play any role in self-policing the risk of association with other bidders. It notes instead, that the obligation to identify associations and connections would rest with

⁵⁵ Eircom Group provided further views in relation to the withholding of confidential information, and these are summarised and discussed in section 3.3.4 of this document.

ComReg, even though it may lack access to the information needed to complete this task. Further it also claims that in the event that ComReg identified an association and contacted a subset of bidders to resolve this, those bidders would in the process gain access to information about participation not available to other bidders. It believes this would offer them an unfair advantage with respect to interpreting price information during the auction.

- *Unreasonable restrictions on bidders* – Telefónica notes that part of the information restrictions ComReg has proposed is simply untenable. Telefónica supports measures to prevent bidders disclosing information germane to their bid strategy, but ComReg’s proposals are too restrictive. It claims that for some bidders, this restriction may even be inconsistent with their stakeholder disclosure obligations. Telefónica, for example, might be required to reveal its participation in the auction under stock-exchange rules.⁵⁶

4.26 In its submission, Telefónica proposed that ComReg should notify applicants of the identity of all other applicants, and the aggregate demand in each band before the main stage of the auction begins. Telefónica held the view that, at a minimum, ComReg should follow the established approach of revealing bidder identities, as practised in similar CCA auctions such as those in Denmark and the UK.⁵⁷

4.2.1.3 Summary of DotEcon’s views

4.27 DotEcon’s views in relation to ComReg’s proposal to restrict Bidder identities, are set out in Section 3.3.3 of Document 12/51.

4.28 Therein DotEcon provides its assessment and concludes as follows:

- *“In summary, we do not consider that there is a compelling case for modifying the Draft IM to provide information to all qualified bidders about the identity of other bidders in the award process. However, this discussion raises the possibility that ComReg include in the Information Memorandum the facility to provide additional information to qualified bidders, or make public information relating to the auction, at its absolute discretion, in order to ensure the efficient running of the auction and subject to its statutory objectives. This reserve power would permit ComReg to address concerns about potential information asymmetries if associations between bidders led*

⁵⁶ See page 21 of Telefónica’s response to the draft Information Memorandum

⁵⁷ See page 21 - 22 of Telefónica’s response to the draft Information Memorandum

to some, but not all, bidders knowing the identity of some participants. However, in many cases we would expect ComReg to be able to resolve such a situation without needing to use such a power.”

4.29 Reasons informing its views, in summary, include inter alia:

- DotEcon’s belief that respondents claims of a so called ‘burden’ on ComReg with assessing applications, is an issue that interested parties should not concern themselves. In particular, DotEcon believes that assessing applications is an issue for ComReg and its legal advisors;
- DotEcon’s view that it is not necessarily correct to assume that parties being notified by ComReg of an ‘association’ would thereby gain access to additional information not available to other bidders, as ComReg’s response would likely involve minimising the amount of information disclosed. In addition, DotEcon notes that ComReg can be guided by the principles of fairness and non-discrimination, and that bidders should not be ‘rewarded’ for breaches of the information policy, noting that there is no reason to treat all bidders symmetrically and disclose similar information about other bidders to the associated parties;
- Bidders would have the opportunity to work out their relative valuations for different packages of spectrum before the Auction. Bidders would be able to observe aggregate demand for spectrum in each band in each time slice lot and the development of prices in each of these lot categories (1-6) in each round, with an approximate market clearing price emerging over the course of the primary bid rounds;
- Bidders would be able to refine their valuations of the packages of lots based on this information and bid accordingly within the activity rules; and
- DotEcon’s consideration that ComReg’s rules prevent the disclosure of confidential information regarding the Auction and therefore are not impractical. It notes that in this regard the disclosure in the public domain of valuation information or comments about intended bid strategy would constitute communication to other Bidders;

4.30 Further, DotEcon notes that in the recent Swiss CCA auction (and in the proposals for auctions in the Netherlands, Denmark, UK and Australia) the identity of Bidders was not revealed. DotEcon claims that the decision regarding the transparency during an auction will depend on the specific aims and objectives of the award process, and the relevant market context, and are just

one component of a package of features forming the auction rules and thus cannot be considered in isolation.

- 4.31 DotEcon claims that Bidders will benefit from price discovery during the auction and will have the opportunity to respond to such information within the Primary Bid Rounds.

4.2.1.4 ComReg's view and final position

- 4.32 ComReg notes DotEcon's assessment and agrees that it is entirely a matter for it and its legal advisors to determine the reasonableness and extent of its approach to assessing applications. While ComReg appreciates respondents concerns in relation to the potential of this work to burden ComReg, it believes that it is best placed to assess this matter.
- 4.33 ComReg is mindful of its objectives for the award set out in Decision D04/12, and the principles to which DotEcon refers, such as non-discrimination and would agree that Bidders should not be 'rewarded' over other Bidders for breaches of its proposed policy on information. In this regard ComReg notes that in the event of it identifying an Association between Bidders, it could deal with the matters arising on a case-by-case basis whilst minimising the amount of information that it might have to disclose to the parties.
- 4.34 ComReg notes that prior to the Auction, interested parties would have the opportunity to work out a relative valuation for different packages of lots regardless of the identity of other Bidders. During the auction, Bidders can refine the valuations based on the aggregate demand information made available to it by the EAS. Therefore, ComReg disagrees with Telefónica's claims that its proposals are somehow 'impractical' or 'untenable'.
- 4.35 ComReg notes that in other similar auctions, such as for example the recent Swiss auction and other proposed auctions in the Netherlands and UK, information in relation to the number of qualified Bidders or Eligibility of other Bidders in the Auction was not revealed.
- 4.36 In summary, and having carefully considered the matters raised by interested parties, ComReg will adopt the information policy as previously set out.

4.2.2 Information made available to Bidders following the qualification stage and assessment of Bidders

4.2.2.1 ComReg's position in Document 11/75

4.37 In subsection 4.1.2 of the draft Information Memorandum ComReg proposed that before the start of the main stage of the auction, it would announce the following information to all bidders:

- the round price for each lot category in the first primary bid round;
- the provisional round schedule for the first few days of the auction; and
- the number of extension rights to be granted to each bidder for the primary bid rounds.

4.38 Furthermore, as previously specified, following the qualification stage, bidders will have already been informed of their individual initial eligibility to bid in each time slice.

4.2.2.2 Summary of Respondents' views

4.39 Telefonica commented on the information that would be presented to bidders at this point in the auction. Accepting that the application stage will act as the first round in the main stage of the auction, Telefonica was concerned that in the Document 11/75 ComReg did not propose to notify bidders of the level of demand at this point in the Auction. Telefonica claimed this could introduce an information gap regarding the first round that would inhibit bidders consideration of subsequent bids in the auction.⁵⁸

4.2.2.3 Summary of DotEcon's views

4.40 DotEcon's consideration of this matter is set out in section 3.4.3 of its Document 12/51. DotEcon considers that it would be appropriate to provide an indication of the aggregate demand for lots in each of Lot Categories 1-6 in the Auction prior to the start of the main stage of the Auction (i.e. in advance of Round 1, where the application forms effectively act as Round "0").

4.41 DotEcon notes that in any case this is done by making prices set for Round 1 available before the start of the auction. It notes that the rule for increasing round prices is based on excess demand, and Bidders will be able to infer which lot

⁵⁸ See page 9 of Telefonica's response to the draft Information Memorandum

categories are subject to excess demand in Round 1 as a result. Therefore, even in the absence of explicitly providing aggregate demand data, bidders would in any case be able to identify which lot categories are facing excess demand based on which round prices are greater than reserve prices. As such, revealing aggregate demand data simply provides bidders with a little more transparency about the level of demand causing the increase in round prices.

- 4.42 DotEcon maintains that there is no great benefit to withholding aggregate demand data for Lot Categories 1-6 at this point. Therefore, ComReg might usefully reveal this information via the EAS prior to the start of the main stage of the auction along with round prices for Round 1 alongside the other relevant information set out in Document 11/75.

4.2.2.4 ComReg's view and final position

- 4.43 ComReg notes Telefónica's concerns regarding the potential for an information gap at the first round of the auction absent information on the aggregate demand for Lots prior to the start of the main stage. ComReg finds DotEcon's proposed treatment to be appropriate and that it would be reasonable to reveal the aggregate demand for Lot Categories 1-6 along with the round prices for the first round of the main stage alongside the relevant information as set out in Section 4.2.1.1 below.

4.2.3 Information made available during the Auction

4.2.3.1 ComReg's position in Document 11/75

- 4.44 ComReg proposed that throughout the Primary Bid Rounds, Bidders will not be provided with information about the Eligibility or specific bidding behaviour of other individual bidders in the Auction. Each Bidder will only be made aware of its own Eligibility, extension rights and its specific bids, and of the aggregate demand for lots in each of lot categories 1 to 6 in the most recently completed round.
- 4.45 Paragraphs 4.117 to 4.121 of Document 11/75 provided further detail in relation to the nature and timing of information to be made available to bidders during the Auction was set out as follows:

"...At the end of a Primary Bid Round, ComReg will release to each Bidder information about:

- *the aggregate demand for Lots in each Lot Category 1 to 6 in the most recently completed round; and*

- *the Bidder's own Bid in that round, its Eligibility in the next round in each Time Slice and how many extension rights the Bidder has remaining.*

Upon scheduling of a further Primary Bid Round, ComReg will provide to each Bidder information on:

- *The Eligibility of that Bidder in the forthcoming scheduled round in each Time Slice;*
- *The number of extension rights the Bidder has remaining; and*
- *The Round Price in each Lot Category for the forthcoming scheduled round..."*

At the end of a Primary Bid Round that is the last such round and prior to the start of the Supplementary Bids Round, ComReg will provide information about the demand for the Party-specific Lots categories 7 to 10 to all Bidders. For the avoidance of doubt, this information will not be released at the end of any Primary Bid Round other than the final Primary Bid Round.

No information will be released about the level of activity or content of individual Bids submitted by other Bidders during the Primary Bid Rounds."

- 4.46 Relevant to the above, at paragraph 4.122 in Document 11/75 ComReg stated that the EAS "...includes a history function that will allow Bidders to view and download information about aggregate demand by category, Round Prices, and their own Bids in previous rounds".
- 4.47 Having regard to subsection 4.20 above and before the start of the first primary bid round, the aggregate demand for lots in each of lot categories 1 to 6 will also be provided to each bidder via the EAS.
- 4.48 In addition, at the end of the Primary Bid Rounds (that is, the end of the last such round and prior to the start of the Supplementary Bids Round), ComReg proposed to provide information about the demand for party-specific lot categories 7 to 10 to all bidders. For the avoidance of doubt, it noted that this information would not be released at the end of any Primary Bid Round other than at the end of the final Primary Bid Round.

4.2.3.2 Summary of Respondents' views

- 4.49 Two respondents provided comments on the level of information available to Bidders during the Primary Bid Rounds. Telefonica claimed that:

- revealing more complete information about bids in each primary bid round could make it easier for bidders to refine their views on the value of lots during the auction. It claims placing restrictions on round-by-round bid revelation may be an acceptable compromise between bidder's needs for price discovery and regulator concerns about tacit collusion; however, ComReg's proposal is excessively restrictive and undermines this balance.⁵⁹; and
- given ComReg's concerns about tacit collusion, Telefónica viewed restrictions on transparency of bids as a much more effective and less distorting measure to tackle this issue than setting high reserve prices.

4.50 H3GI requested clarification on one particular aspect of the proposal, the information available at the end of the primary bid rounds and prior to the start of the supplementary bids round. In paragraph 4.210 of Document 11/75, it was noted that at this point, ComReg would provide information about the demand for the party-specific lot categories 7 to 10 to all bidders. H3GI asked, "*Why does ComReg make this information available at this time? What role or function does such information disclosure serve?*"⁶⁰

4.2.3.3 Summary of DotEcon's views

4.51 DotEcon's consideration of this matter is set out in section 3.5.3 of Document 12/51. DotEcon claims that revealing more complete information about bids, such as that proposed by Telefónica, could allow for signalling in the auction and support forms of tacit collusion. It believes that the information available during the primary bid rounds will provide bidders with sufficient information to allow them to evaluate their bid strategy throughout the primary bid rounds and is generally consistent with recent and upcoming spectrum auctions throughout Europe. It notes the recent Swiss auction, and in the proposals for auctions in the Netherlands, Denmark, UK and Australia, as examples in which information about the individual bids submitted by other bidders is not revealed during the auction.

4.52 DotEcon considers that the proposals made by ComReg regarding Information to be made available during the primary bid rounds are consistent with that proposed elsewhere and are necessary to mitigate the potential for tacit collusion in the auction. At the same time, they provide bidders with sufficient information

⁵⁹ See page 21-22 of Telefonica's response to the draft Information Memorandum

⁶⁰ See page 27 of H3GI's response to the draft Information Memorandum

(i.e. the aggregate demand across different lot categories) to reduce common value uncertainty.

- 4.53 With regard to H3GI's question on the revelation of information on demand for party-specific lots at the end of the primary bid rounds, DotEcon notes that the reason for not making this information available during the primary bid rounds is because it could be used as a particularly effective signalling tool by those bidders capable of making a bid on party-specific lots. By displaying demand for party-specific lots, it could immediately become clear whether a bidder intends to liberalise its existing spectrum or not and may thus provide other competing bidders strong information regarding the strategy of that bidder. DotEcon concludes therefore, revealing this information is incompatible with the policy of only anonymous, aggregate information being revealed in the primary bid rounds.
- 4.54 On the other hand, DotEcon notes ComReg's proposal to reveal this information following the end of the primary bid rounds is necessary to allow bidders to determine if there are any currently unallocated lots. It believes such information may be necessary for bidders when calculating the bid amounts for their supplementary bids, according to the strategy they intend to employ.

4.2.3.4 ComReg's view and final position

- 4.55 ComReg considers that it is reasonable and consistent with the goals of its information policy for the Award Process to limit the ability of Bidders to act collusively based on what they observe other Bidders doing and agrees with DotEcon that revealing more complete information about bids (such as on the Eligibility of other bidders or on the demand for party specific Lots) could create an unnecessary signalling risk. Further, ComReg finds no reason why such information would be required for the efficient running of the auction. It notes that DotEcon concludes in Section 3.3.3 that "*Bidders will benefit from price discovery during the auction and will have the opportunity to respond to such information within the primary bid rounds of the auction*". In this regard, ComReg notes that price discovery is separate from the revelation of more complete information.
- 4.56 In addition, ComReg agrees with DotEcon's view that the proposals regarding Information to be made available during the primary bid rounds are consistent with that proposed elsewhere. ComReg is satisfied that proposals provide Bidders with sufficient information (i.e. the aggregate demand across different lot categories) in order to reduce common value uncertainty associated with bidding on the spectrum.

4.57 In relation to Telefónica's views that restrictions on transparency of bids is a much more effective and less distorting measure to tackle the issue of tacit collusion occurring than setting high reserve prices, ComReg notes that Telefónica provides no reasons to support its view. ComReg also makes the following points:

- First, ComReg has designed the Auction to limit the potential for collusion by only providing aggregate information on Bids submitted by Bidders and thus this limits visibility of Bidders individual bidding strategies;
- Second, interested parties should recall that the EAS provides a history facility, where aggregate demand at other round prices can be reviewed. ComReg therefore fails to see what additional information could be usefully revealed.
- Third, ComReg refutes Telefónica's claims regarding the level of the reserve prices;⁶¹
- In addition, ComReg considers that its Information Policy is appropriate for the Auction, and notes that the worked examples set out by DotEcon helpfully demonstrates how the Auction rules operate, including what information a Bidder would have available to it via the EAS.

4.58 ComReg considers that there is an appropriate and proportionate balance between the amount of information provided to Bidders and the potential for tacit collusion.

4.59 Regarding H3GI's enquiry, the availability of such information could act as a particularly effective signalling tool by those bidders capable of making a bid on party-specific lots. By displaying demand for party-specific lots, it could immediately become clear whether a bidder intends to liberalise its existing spectrum or not and may thus provide other competing bidders strong information regarding the strategy of that bidder. ComReg agrees with DotEcon's conclusion that revealing this information would be incompatible with the policy of only anonymous, aggregate information being made available to Bidders in the primary bid rounds.

⁶¹ ComReg reminds interested readers that it has extensively addressed issues raised by the respondent in relation to likelihood of tacit collusion occurring previously (see Document 11/60a and paragraphs A 9.134 to A 9.14.4). Therein it concluded that "...*The minimum price criterion is a useful instrument alongside other instruments in managing these incentives [for tacit collusion]...*" [emphasis added]. The minimum price incorporates both an upfront reserve price and on going SUFs.

4.60 Notwithstanding, it is useful and desirable to reveal this information following the end of the primary bid rounds so as to allow Bidders to determine if there are any currently unallocated lots or for calculating the bid amounts for supplementary bids.

4.61 In light of the above ComReg will provide the following information:

- the aggregate demand for Lots in each Lot Category 1 to 6 in the most recently completed round; and
- the Bidder's own Bid in that round, its Eligibility in the next round in each Time Slice and how many extension rights the Bidder has remaining.

Upon scheduling of a further Primary Bid Round, ComReg will provide to each Bidder, information on:

- The Eligibility of that Bidder in the forthcoming scheduled round in each Time Slice;
- The number of extension rights the Bidder has remaining; and
- The Round Price in each Lot Category for the forthcoming scheduled round

At the end of a Primary Bid Round that is the last such round and prior to the start of the Supplementary Bids Round, ComReg will provide information about

- the demand for the Party-specific Lots categories 7 to 10 to all Bidders. For the avoidance of doubt, this information will not be released at the end of any Primary Bid Round other than the final Primary Bid Round.

No information will be released about the level of activity or content of individual Bids submitted by other Bidders during the Primary Bid Rounds.

4.2.4 End of Main Stage of the Auction

4.62 Following the completion of the Primary Bid Rounds and the Supplementary Bids Round ComReg stated that it would determine the winning bidders and the base prices to be paid by each winning bidder. In Document 11/75, ComReg proposed that at this point it would announce the outcome of the main stage to bidders.

4.63 ComReg proposed that at this point:

- the number of lots won by each bidder in each lot category will be released to all bidders;

- in addition, each winning bidder will be told the base price that applies to its own winning bid. This information will not be released to other bidders.

4.64 Given that there were no specific responses to the Draft IM concerning the information to be released at the end of the main stage, ComReg is of the view that the proposals made in the Draft IM on this issue should remain unchanged.

4.2.5 End of the Assignment Round

4.2.5.1 ComReg's position in Document 12/25

4.65 In section 4.5.7 of ComReg Document 12/25, ComReg's stated its will allow successful bidders a period of two weeks to come to agree and notify ComReg of any re-organisation of the specific spectrum band. The two-week period for each of the 800MHz, 900MHz and 1800MHz bands will run concurrently with each other and follows the assignment round.

4.2.5.2 Summary of DotEcon's views

4.66 At Section 3.7 of Document 12/51 DotEcon states the following:

"In order to provide a starting point for the Negotiation Phase, following the completion of the Assignment Round, we recommend that ComReg announce the following information to the winning bidder in each spectrum band:

the identity of the winning bidders in that spectrum band;

the specific frequency ranges each winning bidder has been assigned in that band in each of the time slices in which a bidder has won lots in the main stage and/or retained GSM spectrum rights; and

all additional prices to be paid by winning bidders for specific frequency assignments in that band."

4.2.5.3 ComReg's views and final position

4.67 ComReg's view is that the text of the final Information Memorandum will specify the following information to be made available to the winning bidder in each spectrum band at the end of the Assignment Stage:

- the identity of the winning bidders in that spectrum band;

- the specific frequency ranges each winning bidder has been assigned in that band in each of the time slices in which a bidder has won lots in the main stage and/or retained GSM spectrum rights; and
- all additional prices to be paid by winning bidders for specific frequency assignments in that band.

4.2.6 End of Auction (Notification and Grant stage)

4.2.6.1 ComReg's position in Document 11/75

4.68 At the end of the auction ComReg proposed that the results of the auction would be announced to all bidders. While ComReg did not intend to reveal all auction data, ComReg proposed that bidders would be provided with the following information:

- the identity of the winning bidders;
- the frequency ranges awarded to each winning bidder;
- the frequency ranges retained as GSM spectrum rights in the first time period, where applicable; and
- the upfront fee to be paid by each winning bidder, including a breakdown of the base price and any additional prices for specific frequency assignments.

4.2.6.2 Summary of Respondent's views

4.69 One respondent to Document 11/75 commented specifically on ComReg's proposals for revelation of auction results.

4.70 H3GI requested that ComReg publish all bids made in the auction. Noting that such an approach is currently proposed in the UK for the auction of 800MHz and 2600MHz spectrum, H3GI submitted that, as explained by Ofcom "*This is both for transparency purposes and to allow all interested parties to carry out their own verification of the results.*"⁶²

4.2.6.3 Summary of DotEcon's view

4.71 DotEcon's consideration of this matter is set out in section 3.8 of Document 12/51. DotEcon considers that the revelation of all bids made in the auction is not necessary and that the existing proposals regarding the announcement of results

⁶² See page 27 of H3GI's response to the draft Information Memorandum.

provided to bidders at the end of the auction are sufficient in providing bidders with all the information necessary to conclude the award process.

- 4.72 DotEcon considers that if H3GI's concern is simply with verification of the results, it should be noted that ComReg intends to have a third party verify the results of the auction. This would ensure that all the information provided to Bidders at the end of the auction would be correct, based on the Bids placed by all bidders during the Auction. Dotecon believes that on this basis, for auditing purposes, it would not be necessary for full bid information to be published.
- 4.73 DotEcon submits that one or more bidders may have operations in a number of different countries, and given that there are a number of awards proposed throughout Europe auctioning spectrum in the same or similar bands, revelation of bid strategy and spectrum valuations in one auction may reasonably be opposed by any of the bidders in the auction, to the extent that it could provide indication of bid strategy or spectrum valuations in other jurisdictions, as such bid data could be deemed to be commercially sensitive and/or confidential.
- 4.74 Accordingly, DotEcon recommends that ComReg should not reveal information regarding bids submitted during the auction. Further, it notes that this approach has been adopted in a number of other auctions, such as the Danish 2.6GHz auction and the recent Swiss multi-band auction.

4.2.6.4 ComReg's view

- 4.75 ComReg notes DotEcon's assessment of respondents' claims that all the Bids of the Auction should be published and points out:
- The revelation of all Bids potentially provides insight into individual bidding strategies of Bidders. To the extent that this could be deemed to be commercially sensitive and/or confidential, given the potential for participation by the same bidders in other future planned auctions, ComReg sees no reason to set out this information.
- 4.76 ComReg considers the information to be provided at the end of the Auction should not include all Bids received.

4.3 Spectrum caps

4.3.1 ComReg's position in Document 11/75

- 4.77 Section 4.2 of Document 11/75 set out ComReg's proposal on the spectrum caps to included in this Award process.

4.3.2 Summary of Respondents' Views

4.78 Four respondents, eircom Group, H3GI, Telefonica and Vodafone provided views on the spectrum caps associated with this Award Process. These views are summarised in section 4.2.2 of Document 12/25 and Annex 5 of Document 12/25A. Subsequent to the publication of Document 12/25, eircom Group⁶³, and H3GI⁶⁴ submitted supplementary views on spectrum caps which have been considered and addressed by ComReg (see also Document 12/49).

4.3.3 ComReg's Decision on spectrum caps (Decision D04/12)

4.79 ComReg's assessment of the issues raised in relation to spectrum caps is set out in Annex 5 of Document 12/25 and its final position on spectrum caps is set out in section 4.2.3 of Document 12/25.

4.80 Chapter 8 of Document 12/25 (Decision 04/12) set out ComReg's decisions on the Award Process, and paragraph 3.4.13 set out ComReg's states that the Award process will incorporate:

"spectrum caps which will apply to each Qualified Bidder in the competitive selection procedure, and for the duration of that procedure, as follows:

- *2 x 50 MHz for spectrum rights in aggregate across the 800 MHz, the 900 MHz and the 1800 MHz bands, in each of Time Slice 1 and 2;*
- *2 x 20 MHz for spectrum rights in aggregate across the 800 MHz and the 900 MHz bands, in each of Time Slice 1 and 2; and*
- *2 x 10 MHz for spectrum rights in the 900 MHz band in Time Slice 1 only,*

with all spectrum rights of use in the relevant bands, irrespective of whether such rights are on a Liberalised Use-, GSM-only, or other basis being taken into account when determining the spectrum rights in a band."

⁶³ In its submission of 3 April 2012, eircom Group submitted that "...the risks posed by strategic bidding can be easily addressed, by the introduction of further spectrum caps as follows..." and asserted that ComReg should introduce a cap specific to the 1800 MHz band "...of 2 x 30 MHz; While retaining the sub 1 GHz cap at 2 x 20 MHz in the second time slice, introduce caps of 2 x 15 MHz on each of the 800 and 900 MHz bands". Both eircom Group's letter and ComReg's response to same (noting that this issue has already been considered and decided upon in Document 12/25) have been published in Document 12/49.

⁶⁴ H3GI reiterated its view in its letter of 5 April 2012 and criticised the 'spectrum cap structure' decided upon in Document 12/25. Both H3GI's letter and ComReg's response to same (noting that this issue has already been considered and decided upon in Document 12/25) have been published in Document 12/49.

4.3.4 ComReg's final position in the Information Memorandum

4.81 The spectrum caps to be included in the Information Memorandum are the spectrum caps as set out in Decision 04/12.

4.4 Primary Rounds of the Main Stage

4.82 Section 4.3 and 4.4 of Document 11/75 set out ComReg's detailed proposals for the Main Stage of the Award Process which consists of two parts:

- The Primary Bid Rounds; and the
- The Supplementary Bid Rounds.

4.83 This section considers the matters related to the primary bid rounds and discussed the following features of the primary bid rounds.

- Schedule for Primary Bid Rounds;
- Round Prices;
- Deposit calls during the Primary Bids Rounds;
- Bid submission;
- Extension rights; and
- End of Primary Round.

4.84 The other features of the primary round are discussed elsewhere in this document, namely in section 4.6 (Activity Rules), section 4.7 (winner determination and pricing method) and 4.2 (Information Flow and Policy).

4.4.1 Schedule for Primary Bid Rounds

4.4.1.1 ComReg's position in Document 11/75

4.85 Section 4.4.1 of Document 11/75 set out details of how ComReg proposed to schedule the Primary Bid Rounds. In particular ComReg set out that Bid Rounds would be scheduled at its discretion, as follows:

- *"...there is no minimum or maximum length for a Primary Bid Round..."*
"ComReg would typically expect to give at least one day's notice of its intentions with regard to pace of rounds" but that it would not be possible to

give a "...a firm timetable giving the start of each round well in advance; the actual start time of each round will be notified after the completion of the preceding round..." in line with notice requirements;

- All Primary Bid Rounds would be scheduled to run between 9.00 and 18.00 hours on Working Days (assuming that no extensions were triggered);
- ComReg's expectation would be to not run more than 8 such rounds in a single Working Day; and
- *"Bidders will be notified of the start time of a Primary Bid Round through the EAS at least 15 minutes in advance. With the start time of the next Primary Bid Round, each Bidder will also be informed about:*
 - *the duration of the Primary Bid Round;*
 - *the Round Price for each Lot Category in the round;*
 - *the Bidder's Eligibility to Bid in the round (expressed as a number of eligibility points for each Time Slice); and*
 - *the number of extension rights it has remaining (discussed from [sic] paragraph 4.37 below).*
- *Even if all Bidders have submitted Bids prior to the scheduled end of a Primary Bid Round to which no extension has been applied, the round will not be closed early."*

4.4.1.2 Summary of Respondents' views

4.86 Telefónica made two sets of relevant submissions on the matters in relation to the scheduling of Primary Bid Rounds. First, at page 25 of its submission to Document 11/60 (see Document 11/102) it stated the following:

- *"...we urge ComReg to set clear bounds within which it will make decisions on round scheduling. In particular, we request that:*
 - *There are no more than 10 primary rounds each day"*

4.87 Second, in its response to Document 11/75, Telefónica submitted that it would be important for Bidders to have as much certainty as possible over the scheduling of bidding rounds so as to allow management of internal governance processes.

- 4.88 In addition, while in support of ComReg's proposal that round lengths should not normally be less than 30 minutes or more than 2 hours, at page 28 and 29 of its submission to Document 11/75, Telefónica again 'urged' ComReg to set clear bounds within which it will make decisions on round scheduling, including setting:
- a hard cap on the maximum number of rounds per day (e.g. 10 rounds);
 - a minimum period between rounds – Telefónica proposes 30 minutes; and
 - an indicative timetable to be published at the end of each auction day providing a round schedule for the next day of bidding, with the understanding that scheduled times may slip and that the number of rounds may be reduced in case of use of extensions or for other reasons.

4.4.1.3 Summary of DotEcon's view

- 4.89 At Section 4 of Document 12/51, DotEcon considers Telefónica's request for a 'hard' cap on the maximum number of rounds per day. DotEcon considers the current proposal, where ComReg expects to run no more than 8 rounds per day, and notes that this is a number lower than Telefónica's suggested 'hard' cap. It further notes that a 'hard' cap has not been in place in other recent auctions and cites the recent multi-band auction in Switzerland as an example where a hard cap was not specified and the spectrum manager stated its expectation that it would not hold more than 8 rounds per day.
- 4.90 DotEcon however, considers Telefónica's proposal to specify a minimum period between rounds to be a reasonable approach. It considers that this would allow some certainty regarding the minimum time Bidders would have to prepare between rounds and suggests that at least 30 minutes might be a suitable minimum period for ComReg to consider in its final Information Memorandum.
- 4.91 In relation to Telefónica's request for a provisional round schedule for the next day of bidding, DotEcon again considers the proposal to be reasonable however, it notes the scope for times to slip either as a result of extensions being triggered or other exceptional circumstances occurring and therefore, a timetable should be for guidance only – and that ComReg should consider maintaining sufficient flexibility in order to allow it to respond to developments. It recommends ComReg should not be bound to times if circumstances change and should consider this in deciding to issue a timetable.

4.4.1.4 ComReg's assessment

- 4.92 First, in relation to the schedule for primary bid rounds, ComReg recognises there needs to be some balance between setting the number of rounds per day at a reasonable level to enable the auction to progress whilst also providing some predictability and certainty to Bidders as regards the number of rounds in a day. ComReg is conscious of the benefits that retaining some flexibility and discretion in this regard would have in terms of running the Auction effectively and believes that its proposal of expecting to run no more than eight rounds in a day strikes an appropriate balance.
- 4.93 In relation to Telefónica's request for the setting of a minimum period of 30 minutes between rounds, ComReg notes DotEcon's view that Bidders require some certainty regarding the minimum time that will have to prepare between rounds and that a minimum time period of 30 minutes appears reasonable. While, ComReg is also of the view that Bidders require some certainty regarding the minimum time between primary rounds to facilitate their preparations, ComReg is also aware that the auction should progress at a reasonable rate and the setting of a minimum time period between primary rounds should not prevent this. In this regard, ComReg believes that a minimum time period of 30 minutes strikes an appropriate balance, as such a minimum period would not prevent, for example, 8 primary rounds being run in the one day, should that be appropriate.
- 4.94 In relation to Telefónica's request for an indicative round schedule to be published on a daily basis at the end of each auction day providing a round schedule for the next day of bidding, ComReg believes this to also be a reasonable request as it provides additional clarity to Bidders. In this regard, ComReg notes that a similar proposal was included in subsection 4.1.2 of Document 11/75.⁶⁵ However, it should be noted that any indicative round schedule issued is for guidance purposes only, as developments⁶⁶ in the auction process may require ComReg to use different times to those set out in the indicative round schedule, and ComReg retains its rights in this regard. Therefore Bidders should not rely exclusively on any indicative schedule provided to them in the course of the Auction as the timings of the rounds on the auction day itself may differ from those specified in the indicative schedule.

⁶⁵ Subsection 4.1.2 of Document 11/75 outlined a process where ComReg proposed that before the start of the main stage of the auction, it would announce a provisional round schedule for the first few days of the auction.

⁶⁶ The indicative round schedule cannot predict events that might occur on the next auction day, e.g. the triggering of an extension by a Bidder, the arising of exceptional circumstances, etc.

4.4.1.5 ComReg's final position in the Information Memorandum

4.95 Given the above, the schedule for primary bids in the information memorandum will among other things, include text specifying that

- there will be a minimum period of 30 minutes between Primary Bid Rounds; and
- an indicative round schedule will be provided at the end of each auction day providing a round schedule for the next day of bidding. However this indicative round schedule is for guidance only and ComReg retains its rights to use different times to those as set out in indicative round schedule.

4.4.2 Round Prices in Primary Rounds

4.4.2.1 ComReg's position in Document 12/25

4.96 Paragraphs 4.97 to 4.103 in Document 11/75 set out how ComReg proposed to set round prices as follows:

- *“...For Lot Categories 1 to 6 in which there is no excess demand, the Round Price will remain unchanged.”*
- *For each Lot Category 1 to 6, the amount by which the Round Price is increased in the case of excess demand is set at ComReg's discretion. Price increments will normally be based on the level of excess demand, and increments may vary across Lot Categories and across Primary Bid Rounds.*
- *In any case, the Round Price will not increase by more than 50% from one Primary Bid Round to the next. Round prices will be given in units of 1,000 euros.”*

4.97 ComReg also stated that *“For the avoidance of doubt, the Round Price of any Lot Category will not be reduced during the Primary Bid Rounds.”*

4.4.2.2 Summary of Respondents' views

4.98 Two respondents, eircom Group and Telefónica, provided submissions on the round price proposals.

4.99 At paragraph 4.40 of its submission to Document 11/75 Telefónica puts forward the view that ComReg's proposed pricing increment (i.e. *“...[to] not increase by*

more than 50% from one Primary Bid Round to the next....”) would give rise to a source of uncertainty for Bidders. In particular it stated the following:

- *“..one of the most significant sources of uncertainty is the rate at which prices may increase, both by round and on each business day”.*

4.100 Further, Telefónica stated that Bidders would typically value clear rules or guidelines for the approach that the auctioneer would adopt on Bid increments.

4.101 Telefónica further stated that a cap on Bid increments of 50% of current prices would be “*lax*” given ComReg’s proposal to set reserve prices at levels which in Telefónica’s view “*reflect the potential market value of spectrum*”. In relation to this, it considered that ComReg should “*...not fall into the approach taken by some auctioneers of basing bid increments on simple percentages of current prices, without due consideration to the absolute price increases face by bidders...*”. It contends that as a result, prices may escalate rapidly as current round prices increase.

4.102 Telefónica made the following proposal at page 30 of its submission to Document 11/75 in relation to capping the level of bid increments, as follows:

- *“ComReg should set clear bounds within which it will make decisions on bid increments, and in particular focus on absolute bid increases not just percentage increases. Our proposal is that:*
 - *Price increases per round are limited to 250,000 euro per lot*
 - *Price increases per day are limited to 2,000,000 euro per lot”*

4.103 Telefónica claims that it would welcome rules on absolute maximum increments and that guidance on ComReg’s approach would generally help Bidders plan how prices might evolve noting that ComReg could retain flexibility on determining the level of increments “*...subject to reasonable notice of any change in approach*”.

4.104 At page 9 of its submission to Document 11/75, eircom Group submitted that Bidders would need to develop “*...governance procedures and terms of reference to facilitate effective and time sensitive decision making processes during the auction...*”. Hence it claimed ComReg should identify more specific guidelines on pricing increments. It also sought full details how the bid increments would be calculated.

4.4.2.3 Summary of DotEcon's view

4.105 At Section 4.1.3 of Document 12/51, DotEcon considers the issues related to round prices and the rate at which prices may increase during the auction. DotEcon notes that ComReg's choice of percentage increase is consistent with other upcoming or recently completed auctions. However, to provide bidders here with further clarity on potential price movements during the auction, DotEcon believes that ComReg's proposal might reasonably be lowered from 50% to 20%.

4.106 In relation to the respondents' views surrounding the use of limits on absolute price increases, DotEcon states that

- *"..., we consider that a percentage-based cap itself is more flexible and will allow for a more consistent approach to increasing round prices for lot categories with excess demand. Specifying a single maximum absolute price increase per lot per round, as requested by Telefonica, ignores the fact that different lots face different reserve prices and will possibly see further divergence in round prices depending on the patterns of demand that emerge. An absolute cap might limit the ability to increase the price of lot categories most in excess demand and result in categories that are less over-subscribed receiving larger relative price increases than other categories that are more over-subscribed."*;
- *"With regard to a cap on maximum round price increases per day, we again consider that such a cap is arbitrary. There is no certainty that the same number of rounds will be run on one day to the next and there is a possibility that the primary bid rounds will come to a close before the anticipated number of rounds for any one day are run (i.e. the closing conditions are satisfied). In addition, an absolute cap on lot price increases per day could result in a situation where the bidding day has to be 'cut short' if a situation arises where price increases have already reached that cap for that day. ..."; and*
- *"Further we note that the proposed level of maximum increases per lot per round strikes a good balance between providing flexibility to ComReg to progress the auction at a reasonable pace and limiting maximum increases to a level which would mean that corporate governance issues regarding committed expenditure in the auction should not be unduly taxing in the absence of further rules limiting the level of price increases."*

4.107 Given the above, DotEcon consider that a cap on the round prices per lot per day is unnecessary as that there will already be caps on the amount by which round

prices per lot can increase per round. Further DotEcon notes that no recent (or proposed) auctions implement any cap on maximum round increase per day.

4.108 In relation to eircom Group's request for further clarification on how exactly round price increases would be calculated, DotEcon notes that this will be set at ComReg's discretion, and that increments may vary across lot categories and across primary rounds. In addition, DotEcon state:

- *"...Price increments will normally be based on the level of excess demand in a specific lot category, and DotEcon also notes that there may be instances where ComReg should take into account other factors, such as the extent of excess demand in closely substitutable categories. As specified above, any increases in round prices will be bound by a 20% maximum increase per lot per round."*

4.4.2.4 ComReg's assessment

4.109 ComReg notes that two respondents raised issues in relation to ComReg's proposals regarding the calculation of round prices and the rate at which these prices may increase.

4.110 In relation to eircom Group's request on how increases in round prices would be calculated, ComReg notes that Document 11/75 stated that ComReg would increase prices on the basis of the level of demand for Lot categories. ComReg remains of this view, as it cannot have knowledge of excess demand prior to the auction it would therefore not be practical to set out in advance how price increases would be calculated. Moreover, to do so would unnecessarily restrict ComReg's discretion and reduce its flexibility in the Auction.

4.111 ComReg notes that Telefonica requested greater certainty regarding the rate at which round prices may increase and suggested that a 'hard' monetary limit be set on the increase per lot per round and the increase per lot per day.

4.112 In considering Telefonica's latter comment, ComReg firstly notes that the setting of a 'hard' or absolute maximum cap can impact on the effective conduct of the Auction, and hinder ComReg's discretion to adjust round prices in line with excess demand. In this regard, ComReg agrees with DotEcon's analysis where it notes that a 'hard' or absolute cap:

- *"...ignores the fact that different lots face different reserve prices and will possibly see further divergence in round prices depending on the patterns of demand that emerge. An absolute cap might limit the ability to increase*

the price of lot categories most in excess demand and result in categories that are less over-subscribed receiving larger relative price increases than other categories that are more over-subscribed.”

4.113 ComReg notes that the above limitation does not occur when a percentage based cap is employed as such a cap allows the maximum round price increases to differ per Lot Category. As noted by DotEcon above, the reserve prices for Lots in the 1800 MHz band are different to those in the 800 MHz and 900 MHz bands, and additionally during the auction the round prices of Lots in each of these categories may diverge further depending on the patterns of demand. Given the above and having considered DotEcon’s assessment, ComReg remains of the view that a percentage based cap on round prices is appropriate for this Award Process.

4.114 In considering Telefonica and eircom Group’s comments for greater certainty ComReg believes that its initial proposal that round prices would increase no more than 50% can be lowered to 20% with-out materially affecting ComReg’s options in conducting the Auction in an efficient and effective manner. Interested parties should note the round prices in the auction might not reach these maximum limits as the round prices will vary depending on demand, and in this regard, ComReg notes DotEcon’s previous experience with such limits, where it states that:

- *“ComReg’s proposed percentage based cap is consistent with other spectrum auctions and at 50%, the cap proposed by ComReg is in fact lower than those proposed for other upcoming (or recently completed) spectrum auctions in Europe. For example, Switzerland, Denmark and the Netherlands all proposed that the round price would increase by no more than 100% round by round. In practice, these hard limits were never reached (or indeed even approached) in the relevant auctions already completed, and much smaller increments were used.”*

4.4.2.5 ComReg’s final position in the Information Memorandum

4.115 Given the above, the round price increase in the Information Memorandum will among other things, include text specifying that:

- this will be a percentage based cap where the round prices would increase no more than 20%.

4.4.3 Deposit calls during the Primary Bid Rounds

4.4.3.1 ComReg's position in Document 11/75

4.116 At paragraph 4.114 in Document 11/75 ComReg stated that during the Primary Bid Rounds “... it may give notice to one or more Bidders that they need to increase their Deposits to an amount specified by ComReg not exceeding their highest Bid made so far in the Primary Bid Rounds.” ComReg also stated therein that it will specify a deadline by which cleared funds must be transferred which will be not less than three Business Days from giving notice.

4.117 In addition, ComReg stated that it reserved the right to not schedule Primary Bid Rounds in the period between giving notice of a Deposit call and the deadline for receipt of increased Deposits or the actual receipt of such Deposits, whichever is earlier.

4.118 ComReg also stated at paragraph 4.116 in Document 11/75 that in the event that a Bidder fails to meet its new Deposit requirement, that ComReg could amongst other things “...restrict it in making further Bids and/or declare some or all of its Bids already submitted as being incapable of becoming Winning Bids.”

4.4.3.2 Summary of Respondents' views

4.119 Four respondents provided submissions on ComReg's draft proposals on 'deposit calls'. These were eircom Group, H3GI, Telefónica and Vodafone.

4.120 At page 11 of its submission to Document 11/75, Vodafone sought further clarification as regards the draft proposals, asking “ComReg reserve[s] the right to ask any bidder to increase its deposit up to the level of its highest bid (presumably including one of its 'Binding Supplementary Bids') and with three days notice. They can suspend the primary rounds while a bidder is doing that. Can ComReg clarify please?”

4.121 Telefónica supported the rationale behind the draft proposal for the following reason, namely it would reduce the likelihood of 'bidder walk-away'. However, it considered that ComReg should provide further clarity regarding the thresholds at which the deposit call could be made.

4.122 Telefónica also submitted that in the event that a Bidder fails to make a deposit call it should be excluded from the auction and all of its Bids made void. It noted

that ComReg already proposes a Bidder exclusion procedure which it could apply in such an instance.⁶⁷

4.123 Two respondents were opposed to certain aspects of the draft proposals:

- At page 9 of its submission to Document 11/75 eircom Group describes deposit calls during primary rounds as being “...*unnecessary and could prove to be highly disruptive*”. It also considered that they would be administratively difficult for spectrum regulators and operationally difficult for Bidders and that they create potential scenarios where the spectrum regulator is obliged to expel a bidder from the auction for failing to make a deposit call, even though both economic efficiency and revenue maximisation would be better served by keeping the bidder in the auction; and
- At page 26 of its submission to Document 11/75, H3GI submits that “*Three Business Days is not sufficient to organise an increase in a bidder’s deposit*” and it considered that an increase “*will require formal shareholder approval, by the relevant funder and transfer to ComReg’s bank account*”. It submitted that “*Fourteen Business Days is required to organise an increase in a bidder’s deposit.*”

4.124 eircom Group submits that an alternative proposal would be “*to have fixed amounts upfront, say 20% of the estimated final prices*” as this would provide sufficient financial security for the duration of the auction and would thus remove the need for deposit calls altogether.

4.125 At pages 23 and 24 of its submission to Document 11/75, Telefónica suggests that ComReg should provide greater clarity by “*predefining*” thresholds at which this deposit call would be made. It proposes that there would be a deposit review point at the conclusion of the main stage, before the commencement of the supplementary round. Further it contends that deposit calls should be triggered in the event that any bidder’s highest Bid exceeds 200% of its deposit, and that bidders should be prevented from placing any bid in the Supplementary Round which in aggregate exceeds 200% of its standing deposit. It acknowledges that this may delay the process but claims that Bidders should be afforded a reasonable time within which to deliver their increased deposits.

4.126 In its submission of 20 April H3GI set out that “*...the importance of ensuring confidentiality in respect of the amount of any deposit paid. If the amount of a*

⁶⁷ Section 4 of this document discusses Bidder Exclusion in the event of Exceptional Circumstances.

deposit paid by a bidder to ComReg were revealed to other bidders, other bidders could obtain an indication of how that bidder has bid or might bid in subsequent rounds”.

4.4.3.3 Summary of DotEcon’s view

4.127 At Section 4 of Document 12/51, DotEcon considers the issues related to deposit call during the auction and provide their assessment in relation to the respondents’ views received.

4.128 In relation to Vodafone’s query outlined above (as to whether ComReg could request any Bidder to increase its deposit up to the level of its highest Bid, including one of its Chain Bids, within three days and suspend the primary rounds when doing so), DotEcon is of the view that:

- any deposit call request should include Chain Bids; and
- *“ComReg should reserve the right not to schedule any primary bid rounds until it has receipt of the increased deposit amount, or the deadline set by it, whichever is earliest.”*

4.129 DotEcon considers the above approach appropriate as it provides “a balance between allowing ComReg to ensure that deposits remain sufficiently high relative to bids committed throughout the auction and also allowing bidders a reasonable minimum time period to respond.”

4.130 In relation to eircom Group’s suggestions that deposit calls are unnecessary and its suggestion that a single upfront deposit equal to 20% of estimated final price should be used, DotEcon:

- notes that there are various practical issues associated with eircom’s suggestion of linking deposits to the estimated final prices that make it unworkable⁶⁸; and
- considers that a deposit call provision is necessary as *“such a provision is required to ensure that deposits are always adequately high to provide sufficient incentives against bidder walkaway and to provide a suitable remedy in the event of default by the bidder.”*⁶⁹

⁶⁸ For further detail, see Section 4.1.5 of Document 12/51,

⁶⁹ In addition, DotEcon stated that *“As the auction progresses and round prices increase, the initial deposit may prove insufficient given the value of the packages that bidders continue to bid for and thus ComReg should retain the power to request bidders to increase their deposit amount where necessary.*

4.131 DotEcon also notes eircom Group's comments as regards deposit calls creating a potential scenario whereby a Bidder would be expelled from the auction. DotEcon considers that the expulsion of a bidder as a result of a deposit call "is no worse an outcome than waiting until the auction is complete only to find that the bidder does not have sufficient funds to pay its winning bid and subsequently defaults on this obligation." In this regard, DotEcon notes that:

- *"Indeed, such a situation would have a highly negative impact on the outcome of the auction as there would be potentially unsold spectrum which could otherwise have been bid for and possibly won by other bidders in the auction. Such an outcome would be inefficient and highly undesirable given the importance of this award process for the emergence of advanced mobile data services and the development of the market for these services."*

4.132 In relation to the period of time that a bidder would be granted to provide the funds necessary as a result of a deposit call, DotEcon firstly notes that ComReg proposed a period of not less than three Working Days in Document 11/75. DotEcon then considers H3GI's assertion that it would require fourteen Working Days due to the need for "*formal shareholder approval by the relevant funder and transfer to ComReg's bank account*", and in relation to this assertion, DotEcon notes that:

- *"The three business day rule proposed by ComReg is not an upper limit, but a lower bound".*
- *"This grace period for deposit top-up is not intended to provide a window for discussions with shareholders, but rather to provide sufficient time for cleared funds to be transferred to ComReg's bank account. As all Bids are binding, bidders need to ensure that they have appropriate authorisations in place prior to placing a bid and before deposit calls occurring. Accordingly, the only effect of a deposit call is to bring forward by a short period of time the transfer of funds that the bidder has committed to paying. We do not envisage this as presenting insurmountable corporate governance issues."*
- *"As the auction progresses and prices of lots in different lot categories develop, bidders will have a rough indication of if and when they are*

This does not mean that deposit calls will necessarily occur, but the auction rules must provide for all eventualities, including the possibility of price increases far above reserve prices."

approaching a threshold at which point they may need to seek guidance or sign-off from high-level decision-makers within their organisation.”

4.133 DotEcon then states that *“it may be useful to provide further clarity on when bidders will be required to increase their deposits to allow bidders to anticipate the deposit call with a greater level of certainty and so begin taking the necessary steps,”* and in this regard, DotEcon notes that Telefonica suggestion on the use of specific ‘trigger points’. DotEcon considers that ‘trigger points’ can have some merit and state that:

- *“We would consider that an appropriate ‘trigger point’ would be that where a bidder’s deposit falls below 50% of their highest bid placed in the auction so far, ComReg would reserve the right at any time to require that such a bidder increase its deposit to at least 50% of its highest bid. In the case of a bidder that is in the course of a restructuring process ComReg could also reasonably reserve the right to make such deposit calls as it deems appropriate.”*

4.134 DotEcon finally considers Telefonica’s suggestion that bidders should be prevented from placing any bid in the supplementary bids round which in aggregate exceeds 200% of their standing deposit, and state that

- *“we would consider that such a requirement may be overly restrictive on the amounts that bidders can place on their supplementary bids. Given the fact that the supplementary bids round is a single round, there would be no opportunity for bidders to increase their deposits mid-round and as such may find they are unable to make the bids they wish to place. However, if after the supplementary bids round there is at least one bidder whose deposit is less than 50% of its highest bid, ComReg should consider reserving the right to issue a deposit call for one or more deposits to be topped up to at least 50% of a bidder’s highest bid before the announcement of the results of the main stage of the auction”*

4.4.3.4 ComReg’s assessment

4.135 In considering the deposit calls, ComReg notes that the respondents provided views on a number of matters.

4.136 In relation to the need for a deposit call, ComReg notes that Telefonica supported ComReg’s proposal for a Deposit call and noted that this could lead to Bidder exclusion, while eircom Group questioned the need for a deposit call and suggested an alternative approach linked to the estimated final prices.

- 4.137 In considering these views, ComReg firstly notes that as the auction progresses and round prices increase, the price of the packages that bidders bid for will be increasing and the initial deposits from bidders may be substantially lower than the value of these packages. Given this, a situation could arise at the end of the Auction that a Winning Bidder may have insufficient funds to pay the upfront fees associated with its Winning Bid and therefore default on its Winning Bid. As discussed by DotEcon discovering this situation at the end of the auction can *“have a highly negative impact on the outcome of the auction as there would be potentially unsold spectrum which could otherwise have been bid for and possibly won by other bidders in the auction.”*
- 4.138 The inclusion of a deposit call provision in the Award Process provides significant safeguards against a default situation occurring at the end of the auction, as such a default situation might instead be discovered during the auction following a deposit call and this can lead to a more efficient auction outcome. (see section 4.1.1 of this Document for ComReg’s position on Bidder exclusion under exceptional circumstances).
- 4.139 Given the above, ComReg is of the view that it is appropriate to include a deposit call provision in this Award Process and ComReg furthermore notes that such provisions are a common feature of spectrum auctions.
- 4.140 In relation to eircom’s alternative suggestion of a single upfront deposit equal to 20% of the estimated final prices, and having noted DotEcon’s views, ComReg believes that this alternative approach is impractical as, among other things, it is not possible for ComReg to predict the final Lot prices for a Winning Bidder nor the number of Lots won by a Winning Bidder. In addition, it is questionable whether 20% of the final estimated prices would be sufficient to guard against a Winning Bidder defaulting at the end of the Auction. ComReg therefore believes that Eircom Group’s alternative approach is not appropriate.
- 4.141 The remaining comments from the respondents relate to the mechanics of the deposit call and in this regard, ComReg notes that H3GI suggested that a minimum period of 14 days be provided to Bidders to meet any such request, while both Vodafone and Telefónica sought further clarity on the nature of the deposit call process.
- 4.142 In relation to H3GI’s suggestion of a 14 day period, ComReg agrees with DotEcon’s observations that *“the grace period for deposit top-up is not intended to provide a window for discussions with shareholders”* and that *“bidders need to ensure that they have appropriate authorisations in place prior to placing a bid and before deposit calls occur”*. ComReg therefore rejects H3GI’s suggestion that

a 14 day period will automatically be required. However, ComReg acknowledges that Bidders will need some time to provide the necessary funds, and in this regard, ComReg believes that its Document 11/75 proposal of a minimum period of 3 days is appropriate. In this regard, ComReg notes that this is a lower limit and a greater number of days could be provided if appropriate.

4.143 In relation to the requests for further clarity on when bidders might be required to increase their deposit amount, ComReg notes Telefónica's suggestion on the inclusion of 'trigger points' and DotEcon's advice that it may be useful to include 'trigger points' in the Award Process. Considering these views, ComReg also believes that the inclusion of 'trigger points' is appropriate as it gives further clarity to the Bidders.

4.144 Regarding the level of this 'trigger point' ComReg notes DotEcon's advice that *"an appropriate 'trigger point' would be that where a bidder's deposit falls below 50% of their highest bid placed in the auction so far, ComReg would reserve the right at any time to require that such a bidder increase its deposit to at least 50% of its highest bid."* ComReg believes that this advice strikes the appropriate balance between providing additional advice to Bidders while at the same time retaining ComReg's discretion.

4.145 ComReg also notes that Vodafone sought clarity on specific aspects of the deposit call process. In response to this request, ComReg confirms that:

- chains bids will be included in the process to determine the highest bid of the Bidder; and
- ComReg reserves the right to suspend bidding while deposits are being topped up.

4.146 Finally ComReg notes

- H3GI's views on *"...the importance of ensuring confidentiality in respect of any deposit paid"*, ComReg agrees that confidentiality over the amount of any deposit paid should be maintained and in this regard ComReg also notes that all Bidders would be required to comply with the rules of the auction, which among other things, specify confidentiality constraints; and
- that a bidder in the course of a restructuring process may be subject to additional considerations and in this regard, ComReg reserves the right to make deposit calls as it deems appropriate.

4.4.3.5 ComReg's final position in the Information Memorandum

4.147 Given the above, the deposit call process in the primary rounds as specified in the Information Memorandum will among other things, include text specifying that:

- a deposit call process is to be included in the auction;
- where a bidder's deposit falls below 50% of their highest bid (including any chain bids submitted) placed in the auction so far, ComReg reserves the right to require such a bidder to increase its deposit.
- where a deposit call is issued, a deadline of not less than three Working Days from the date of notice will be provided to the Bidder;
- where a deposit call is issued, ComReg reserves the right to suspend bidding while deposits are being topped up; and
- in the case of a bidder that is in the course of a restructuring process ComReg reserves the right to make such deposit calls as it deems appropriate.

4.4.4 Other features of the Primary Round

4.148 Aside from the primary round matters discussed above ComReg notes that other features of the primary round were not commented upon by the respondents. These features are discussed below and include matters related to:

- Bid submission;
- Extension rights; and
- End of Primary Round.

4.4.4.1 DotEcon's Assessment

4.149 At Section 4.1 of Document 12/51, Dotecon provides views on other features of the Primary Bid Rounds

Bid Submission

4.150 In respect of the Bid submission feature of the Primary Bid Rounds, DotEcon states that:

- *“Given that there were no specific responses to the Draft IM concerning the process of bid submission in the primary bid rounds, we consider that the proposals made in the Draft IM on this issue should remain unchanged.”*

Extension Rights

4.151 In respect of extension rights, DotEcon states that:

- *“Given that there were no specific responses to ComReg on the issue of extension rights in the primary bid rounds, we consider that the proposals made in the draft Information Memorandum on this issue should remain unchanged.”*

4.152 In addition, DotEcon notes that a small modification to the activity rule relating to primary bid rounds and extension rights is discussed subsequently in its report, (see Section 4.3.4 of this document)

End of Primary Bid Rounds

4.153 In respect of the End of Primary Bid Rounds feature, ComReg notes that DotEcon discuss this in section 3 in relation to Information Policy.

4.4.4.2 ComReg’s assessment and final position in the Information Memorandum

4.154 In relation to the Bid submission, Extension Rights and End of Primary Round features of the Primary Rounds, ComReg notes that no respondents’ views were received on these matters and that DotEcon advises that the proposals as set out in Document 11/75 do not need to be modified, with the exception of the extension rights rules which is discussed later in section 4.6 of this document in relation to activity rules.

4.155 In relation the extension rights rules, ComReg agrees with the rationale for this modification, and notes that it simplifies the approach for Bidders whose Eligibility has dropped to zero for both Time Slices. Given this ComReg believes that it is appropriate to adopt this modification.

4.156 Given the above, ComReg’s final position as set out in the Information Memorandum

- maintains the Document 11/75 proposals in relation to the Bid Submission, Extension Rights and the End of Primary Round features; and

- adopts DotEcon's proposed modification to extension rights in relation to Bidders whose Eligibility has dropped to zero for both Time Slices.

4.5 Supplementary Bids Round

4.157 The Supplementary Bids Round was discussed in Section 4.3 and 4.4 of Document 11/75. With the exception of restrictions on Bid Amounts for Supplementary Bids (which is discussed in section 4.6 below in relation to activity rules) this section discusses:

- Schedule for the Supplementary Bids Round
- Bid submission;
- Validity of Supplementary Bids; and
- Deposit Calls after the Supplementary Bids Round

4.5.1 Schedule for the Supplementary Bids Round

4.5.1.1 ComReg's position in Document 11/75

4.158 At paragraphs 4.126 to 4.129 in Document 11/75 ComReg stated that "*The start time and duration of the Supplementary Bids Round will be announced by ComReg after the completion of the Primary Bid Rounds*" and that there would be "*at least one clear Business Day between the last Primary Bid Round and the start of the Supplementary Bids Round*".

4.159 ComReg also considered that the round would last for "*...at least 3 hours and no more than 6 hours*" and that a single extension right would be provided to bidders for use during the round.

4.5.1.2 Summary of Respondent's views

4.160 One respondent, Telefonica, provided views on the schedule for the Supplementary Bids Round. At page 29 of its submission to Document 11/75, Telefónica stated its support for the scheduling arrangements where

- there would be "*at least one clear Business Day between the final Primary Bid Round and the start of the Supplementary Bids Round*"⁷⁰; and

⁷⁰ Page 25 of Telefónica's submission to Document 11/60 (see Document 11/102)

- the duration of the Supplementary Bids Round would have a minimum duration of 3 hours.

4.161 At page 2 of Telefonica's supplementary submission⁷¹ of 13 April 2012, and having considered the complexity of the auction and the significant decisions that must be made by all bidders when submitting supplementary round bids, Telefónica revised its previous view and submitted that

- *“a minimum of five working days is required between conclusion of the primary clock rounds and submission of the supplementary round bids”.*

4.5.1.3 Summary of DotEcon's view

4.162 At section 4.2.1 of Document 12/51, Dotecon provides its views on the schedule for the supplementary bids round and notes that Telefonica is the only respondent to comment on this matter.

4.163 In considering Telefonica's comment, DotEcon firstly notes that Telefonica propose a significant extension of the minimum time required between the completion of the Primary Bid Rounds and the start of the Supplementary Bids Round, and in this regard DotEcon note that

- *“a balance must be struck between allowing bidders a sufficient amount of time to consider the supplementary bids they may wish to place and unnecessary delay of the progression of the auction.”*

4.164 However, given that bidders will have to consider a potentially large number of bids and the resulting restrictions on bids as a result of the final price cap and the relative caps, DotEcon adds that

- *“we believe that bidders may benefit from a guaranteed period of time greater than one business day between the end of the primary bid rounds and the supplementary bids round.”*

4.165 In relation to the formulation of Supplementary Bids, DotEcon notes that Bidders will have access to the supplementary bids editor within the EAS from the start of the auction, and this will provide Bidders with information regarding their own bids.

4.166 While DotEcon notes that bidders will not be able to submit bids until the supplementary bids round is in progress, it points out that “the supplementary

⁷¹ See ComReg 12/49

bids editor will allow them [i.e. Bidders] to check the validity of bids and their consistency with the auction rules”

4.167 Having considered the material before it, DotEcon

- *“recommend that ComReg allow for a period of at least 3 business days between the end of the primary bid rounds and the start of the supplementary bids round. We consider that this amount of guaranteed time between the final primary bid round and the supplementary bids round should provide bidders with sufficient time to consider the supplementary bids they wish to submit and to use the supplementary bids editor of the EAS to check the validity of these bids.”* and
- states that *“it may be prudent to extend the minimum duration of the supplementary bids round to at least 6 hours allowing bidders much longer to submit their supplementary bids.”*

4.5.1.4 ComReg’s assessment

4.168 ComReg notes that one respondent, Telefónica, commented on the schedule for the Supplementary Bids Round. Telefónica suggested that there should be at least 5 clear Business Days between the start of the Supplementary Round and the end of the Primary Round, given the complexity of the auction and the significant decisions that must be made.

4.169 While ComReg is aware that bidders may have to consider a potentially large number of bids and the resulting restrictions on bids as a result of the final price cap and the relative caps, ComReg also notes that bidders will have access to the supplementary bids editor in the EAS from the start of the auction. ComReg is of the view that this reduces the complexity of submitting supplementary bids in the supplementary round, as during the primary rounds bidders will be able to check the validity of potential bids and their consistency with the auction rules using this editor.

4.170 Notwithstanding, bidders should be given a sufficient amount of time to consider their supplementary bids and in this regard, ComReg notes DotEcon’s recommendation in section 4.1.2 of Document 12/51 that a period of at least three business days be specified and that the supplementary round should last at least 6 hours.

4.171 ComReg believes that DotEcon’s suggestion strikes an appropriate and proportionate balance between allowing sufficient time to bidders to consider their

bids and ensuring a timely progression of the auction, and is of the view that this should be adopted in the Information Memorandum.

4.172 ComReg notes that this approach would provide a guaranteed minimum of nearly four Working Days and that it sets a lower bound limit which would not fetter ComReg's discretion to set a longer time period should ComReg considers that to be appropriate.

4.5.1.5 ComReg's final position in the Information memorandum

4.173 ComReg final position is that text of Information Memorandum on the schedule of supplementary bids will, among other things, specify:

- that a period of at least three Working Days is to be provided between the end of the primary rounds and the start of the supplementary rounds; and
- that the supplementary round is anticipated to last for at least 6 hours.

4.5.2 Bid submission

4.5.2.1 ComReg's position in Document 11/75

4.174 Paragraphs 4.130 to 4.137 in Document 11/75 set out ComReg's proposals in relation to the submission of supplementary bids and, among other things, stated that:

- *"A Bidder may submit only one Bid form in the Supplementary Bids Round. However, this may list many Bids on different packages. A Bid form may consist of Bids for up to 2,000 packages (including those packages on which Bids were submitted during the Primary Bid Rounds)."*

4.5.2.2 Summary of Respondents' views

4.175 Two respondents, eircom Group and Telefónica, provided views in relation to ComReg's proposals on Bid submission in the Supplementary Bids Round.

4.176 At pages 9 and 10 of its submission to Document 11/75, eircom Group noted that while a provision for up to 2,000 packages would seem sufficient to satisfy some bidders in the auction, it could be a concern for bidders who have spectrum that is subject to early liberalisation options. Furthermore, it noted that in its case it has twelve different release scenarios, and should it bid to liberalise its GSM spectrum it would effectively have only 166 Bids per release scenario. Eircom argued that this would be to the advantage of Bidders without any release

options, or Bidders with less release options, since they can take advantage of more Bids per release scenario.

4.177 eircom Group also considered that there would be no additional computational burden on ComReg (or its auction consultant) as a result of increasing the number of Supplementary Bids permitted by a Bidder with multiple potential release scenarios. It considered that the winner determination and second pricing procedures proposed by ComReg only consider Bids that correspond to a particular release scenario per Bidder and not the total number of Bids per bidder. eircom Group proposed that the cap on the number of Bids per release scenario should be restated in terms of Bids per release scenario per bidder, not the total number of Bids per bidder, and provided the following options as an example:

- Bidder without existing holdings in T1: 2,000 Bids
- eircom Group (12 release scenarios): $12 \times 2,000 = 24,000$ Bids
- Vodafone and O2 (3 release scenarios): $3 \times 2,000 = 6,000$ Bids

4.178 At page 28 of its submission to Document 11/75, Telefónica supported the proposal for a common cap of 2,000 Bids on the basis that this should give all bidders sufficient flexibility, whilst observing that, owing to the inclusion of party-specific Lots, the number of theoretical package bid options varies by bidder, with the implication that the cap on the number of Bids per release scenario affects bidders differently.

4.5.2.3 Summary of DotEcon's view

4.179 In section 4.2.2 of Document 12/51, DotEcon considers the Bid submission issues related to the supplementary round and firstly states that it would not expect the maximum cap on supplementary bids to 'bite', as this cap is intended to be set at a much higher level than the level bidders would realistically wish to use.

4.180 DotEcon then considers the detail of eircom's suggestion and notes that this can give rise to issues of fairness between bidders, as some bidders would be allowed to make up to 12 times more supplementary bids than other bidders. DotEcon acknowledges that there should be a reasonable level of certainty that bidders with several different release scenarios can express the breadth of its demand fairly comprehensively, and adds that "*it would be difficult to justify such asymmetric application of auction rules.*"

- 4.181 Given this, DotEcon then suggests that “if this cap is set sufficiently high there would not be a need to differentiate between Bidders given the significant degree of flexibility afforded by allowing for a maximum number of Bids that would be a reasonable degree greater than any bidder may be expected to require in practice.”
- 4.182 DotEcon notes the practicalities of this maximum cap in the auction and note that “there are limits on the number of supplementary bids that can be submitted in terms of reasonable system load and the time required to upload, check and process bids.”
- 4.183 In light of these practicalities and the respondents’ views, DotEcon states that it considers “*that allowing for a maximum of 3,000 packages should provide sufficient flexibility for all bidders in the supplementary bids round to express their demand comprehensively.*”
- 4.184 In relation to this suggestion, DotEcon observes that this maximum cap would be in line with the restrictions on the number of Supplementary Bid packages allowed in other recent auctions.

4.5.2.4 ComReg’s assessment

- 4.185 ComReg notes that two respondents, eircom Group and Telefónica, provided views in relation to the Bid submission feature in the Supplementary Bids Round, and that Telefónica supported ComReg’s proposals as set out in Document 11/75.
- 4.186 In relation to eircom Group’s suggestion, ComReg is of the view that the asymmetric application of the Auction Rules as suggested by eircom Group would be difficult to justify, particularly as some bidders would be able to submit up to 12 times more supplementary bids than other bidders.
- 4.187 To avoid this situation, ComReg believes that the same maximum cap should be set for all bidders and that this cap should be sufficiently high such that it would not impinge upon the bidders bid in the supplementary Bids round. In this regard, ComReg notes DotEcon’s assessment as set out in section 4.2.2 of Document 12/51, and its recommendation that a maximum of 3000 Supplementary Bids be allowed, as this level is sufficiently high to allow a bidder to express its demand comprehensively.
- 4.188 ComReg notes that this suggestion is in keeping with the restrictions on the number of Supplementary Bid packages allowed in other recent auctions, where

Switzerland allowed 3000 Bids, Australia 500 Bids and the Netherlands 2000 bids.

4.189 Given the above, ComReg is of the view that the maximum number of bids allowed in the Supplementary Bids round is to be set at 3000.

4.5.2.5 ComReg's final position in the Information memorandum

4.190 ComReg's final position is that text of Information Memorandum on the bid submission of supplementary bids will, among other things, specify that:

- the maximum number of Supplementary Bid packages allowed in the Supplementary Bids Round will be 3000 packages.

4.5.3 Validity of Supplementary Bids and Deposit Calls after the Supplementary Bids Round

4.191 Aside from the supplementary round matters discussed above, ComReg notes that two other features of this round were not commented upon by the respondents. These features are discussed below and include matters related to:

- Validity of Supplementary Bids; and
- Deposit call after the Supplementary Bids Round;

4.5.3.1 DotEcon's Assessment

Validity of Supplementary Bids; and

4.192 In section 4.2.3 of Document 12/51, DotEcon state that:

- *"Given there were no specific responses to ComReg on the issue of validity of supplementary Bids, we consider that the proposals made in the draft Information Memorandum should remain unchanged"*

Deposit call after the supplementary Round;

4.193 At Section 4.1.5 of Document 12/51, DotEcon considers the issues related to deposit call. In relation to supplementary bids, DotEcon state that:

- *"In addition, bidders may be required to increase their deposits following the supplementary bids round to ensure that the deposit held by ComReg covers up to 100% of the highest bid made by the bidder.";* and

- *“In this case, ComReg should not release the outcome of the Main Stage in the period between issuing notice of a Deposit Call to one or more Bidders and the deadline for receipt of Deposit Top-Ups or the actual receipt of Deposit Top-Ups, whichever is earlier.”*

4.5.3.2 ComReg’s assessment and final position in the Information Memorandum

4.194 In relation to the validity of Supplementary Bids, ComReg notes that no respondent’s views were received on this matter and that DotEcon advises that the proposals as set out in Document 11/75 do not need to be modified. Given this, ComReg’s final position is that the Information Memorandum maintains the proposals on validity of supplementary bids as set out in Document 11/75

4.195 In relation to the issue of a deposit call after the supplementary round, ComReg notes that the rationale for a deposit call has been discussed above in relation to the primary rounds, and ComReg is of the view that the same rationale applies to the supplementary round. Given this ComReg is of the view that it would be appropriate to include a provision for a deposit call after the supplementary round, and ComReg’s final position is that that the information memorandum should include text that:

- reserves ComReg’s right to issue a deposit call after the supplementary round and in advance of the announcement of bidders; and
- reserves ComReg’s right to not release the outcome of the Main Stage in the period between issuing notice of a Deposit Call to one or more Bidders and the deadline for receipt of Deposit Top-Ups or the actual receipt of Deposit Top-Ups, whichever is earlier.

4.6 Activity rules

4.196 This section discusses the activity rules to be used in the Main Stage of the auction, as set out in chapter 4.3 and 4.4 of Document 11/75

4.6.1 Overview of ComReg’s position in Document 11/75

4.6.1.1 Activity rules for Primary Bids

4.197 Paragraphs 4.69 to 4.75 in Document 11/75 set out details on the activity rules for the Primary Bids. These rules would govern bidding behaviour during the Main Stage of the Auction.

4.198 Therein ComReg stated the following:

- *“The activity associated with a Bid for a package of Lots in respect of a Time Slice is determined as follows:*
 - *for each Lot Category falling into the Time Slice considered, the number of Lots in that category included in the Bid will be multiplied by the eligibility points per Lot applying to that category; and*
 - *these values will be summed across all Lot Categories falling into the Time Slice considered.”*

4.199 ComReg also stated that the total Eligibility of a Bidder for the first Primary Bid Round, its initial Eligibility, *“...is set by the Lots selected on the Bidder’s Application, as described in Section 3.4.3 ...”* and that in each Primary Bid Round, a Bidder may submit a Bid with an activity level less than or equal to its current Eligibility in each Time Slice, and in accordance with spectrum caps (set out in subsection 4.2 of Document 11/75). ComReg set out that *“In certain limited circumstances, a Bidder is permitted to make a Bid whose activity exceeds its current Eligibility in one or both Time Slices. Such Bids are termed **Relaxed Primary Bids** and are described in subsection 4.4.”* [emphasis added]

4.200 Further ComReg stated:

- *“For each subsequent Primary Bid Round, each Bidder’s **Eligibility** in a Time Slice is equal to that Bidder’s activity in that Time Slice in the previous Primary Bid Round, with the exception that if a Bidder makes a Relaxed Primary Bid, its Eligibility in both Time Slices will be maintained at its current level. Thus, over successive Primary Bid Rounds, a Bidder’s Eligibility in a Time Slice can stay the same or fall, but can never increase.*
- *The EAS will not allow any Bidder to submit a Bid which is in violation of the spectrum caps (set out in subsection 4.2). The EAS will not permit a Bid whose activity exceeds the Bidder’s current Eligibility to Bid in either Time Slice, unless the Bidder is in a situation where it can make a Relaxed Primary Bid. If a Bidder checks a Bid that is invalid, it will be required to return to the Bid form to revise its Bid.*
- *The EAS will also warn a Bidder if a Bid it checks would result in a reduction of the Bidder’s Eligibility in either Time Slice for the next Primary Bid Round.*

In this case, the Bidder would have the option to return to the Bid form to revise their Bid.

- *As the Primary Bid Rounds progress, Bidders may switch Eligibility between categories of Lots. Therefore, within a given Time Slice, it is possible that a Bidder's activity in one or more Lot Categories may increase in a round relative to the previous round, provided that the Bidder's activity in other Lot Categories is sufficiently reduced in the same round. For the avoidance of doubt, eligibility points are not transferable across Time Slices; it is not possible to increase bidding in one Time Slice and correspondingly reduce bidding in the other Time Slice.* [emphasis added]

4.6.1.2 Relaxed Primary Bids

4.201 At paragraphs 4.76 to 4.94 in Document 11/75 ComReg set out the proposed process and rules to be employed in cases where a Bidder submits a Relaxed Primary Bid.⁷²

4.202 In particular ComReg stated that for a Bidder to be permitted to make a Relaxed Primary Bid on a package denoted as 'package X', it *"...is necessary that none of the associated Binding Supplementary Bids..."* exceed the price of the package subject to the Binding Supplementary Bid at current Round Prices, and the following applies (see paragraph 4.80):

- *"Binding Supplementary Bids are required on the packages which were subject to Primary Bids:*
 - *made since the most recent Primary Bid Round in which the Bidder was eligible for package X; and*
 - *made in a round in which the Bidder reduced its Eligibility to Bid in one or both Time Slices."*

4.203 ComReg stated that if one or more of the associated Binding Supplementary Bids exceed the price of Lot at current Round Price, then it would not be possible to make a Relaxed Primary Bid for package X in the current Primary Bid Round. Further it noted that *"For the avoidance of doubt, this does not rule out the possibility that Relaxed Primary Bid might be possible for that package in some later Primary Bid Round depending on the subsequent evolution of Round Prices."*

⁷² A Relaxed Primary Bid is a Bid for packages that exceed the Bidder's current Eligibility and where the circumstances are consistent with the preferences that the Bidder had expressed through previous bids made in rounds where the Bidder dropped Eligibility.

4.204 ComReg also stated that when making a Relaxed Primary Bid, “...it is only necessary for a Bidder to enter a single package that is the subject of its Bid into the EAS. The associated Binding Supplementary Bids that need to be made together with the Relaxed Primary Bid will be identified by the EAS and notified to the Bidder on checking its Bid. On submission of its Bid, these associated Binding Supplementary Bids will be entered by the EAS.”

4.205 In the interest of clarity, ComReg further noted that “The EAS will provide facilities to assist in determining when the current Round Prices and the history of a Bidder’s reductions in Eligibility in particular rounds will permit a Relaxed Primary Bid on a particular package”. [emphasis added]

4.6.1.3 Restrictions on Bid amounts for Supplementary Bids

4.206 Paragraphs 4.138 to 4.149 in Document 11/75 set out the following rules in relation to the Bids in the Supplementary Bids Round. Taking account of the rules set out in Section 4 of the draft Information Memorandum, ComReg set out to explain the constraints on the use of Supplementary Bids using some specific examples.⁷³

4.6.2 Respondents’ views on activity rules

4.207 Three respondents (eircom Group, Telefónica and Vodafone) made submissions on the proposed activity rules. Another respondent, H3GI, subsequently submitted comments on the other respondents’ views. In addition, eircom Group also submitted a report prepared on its behalf by Power Auctions on the activity rules. This report considered a number of technical matters and should be referred to directly for a discussion of the issues presented. Non-confidential versions of these submissions are available at Document 12/49.

4.6.2.1 Claims that activity rules are complex

4.208 In the main, interested parties support ComReg’s proposals to have activity rules in the Auction however, it has been a consistent theme from them through the consultation process to date that the activity rules themselves are ‘complex’. Some respondents requested changes to the rules or sought further clarification of the activity rules.

⁷³ In particular at subsection 4.4.3 (and at Annex 7) of Document 11/75, ComReg set out specific examples of the types of constraints that might arise as follows: (1) The structure of constraints on Supplementary Bids where the Final Primary Package not subject to a relaxed Bid; and (2) The structure of constraints on Supplementary Bids where Final Primary Package subject to a Relaxed Primary Bid.

- 4.209 In its submission to Document 11/75 of 12 March Vodafone expressed concern in relation to the increasing complexity of the auction claiming there to be “*strange new activity rules*”. It considered that previous CCA auctions have had much simpler activity rules, and given that these ‘new rules’ have not been used in any real world auctions the impact or risk of unintended consequences is not known.
- 4.210 At page 5 of its supplementary response of 11 April 2012 Vodafone suggests that ComReg “...*could reduce the complexity by removing the proposed feature to allow relaxed primary bids, while actually enhancing the probability of fulfilling the objectives of the award process*”.
- 4.211 In its submission to Document 11/75 Telefónica also submits concerns in relation to the activity rules and claims there to be “*additional complexity involved*”. It believes that it is not aware of the proposed rules being tested or used elsewhere. In particular, Telefónica claims the rules put a huge burden on potential Bidders to interpret the implications of the rule changes. It notes that the complexities could introduce asymmetries between bidders, an effect that would be inconsistent with ComReg’s goal of promoting fair competition and efficient outcomes, and that the complexity could lead to erroneous outcomes more generally.

4.6.2.2 Relaxed Primary Bids and implications

- 4.212 Vodafone considered that Bidders may not understand with the implications of Relaxed Primary Bids, and that they might become unable to express their preferences properly, leading ultimately to an outcome which would in its opinion be inefficient.
- 4.213 Respondents generally expressed some concerns in relation to the operation of the Relaxed Primary Bids, and the Supplementary Bids Round. Respondents queried the level of assistance to be provided by the EAS, in particular, for example in automatically calculating any necessary Chain Bids.
- 4.214 At page 8 of its submission to Document 11/75, eircom Group agreed both with the proposal for a final price cap and with the proposal to allow eligibility-point exceptions on the basis that they are consistent with revealed preference constraints. eircom Group considered such an approach to be appropriate in the Primary Bid Rounds so as to allow bidders to bid on their most profitable package in each of the Primary Bid Rounds.

4.215 However, in recommending that ComReg implement similar rules to those proposed in ComReg document 11/75, eircom Group maintained that modifications were required to address the following points:

- The example provided in Annex 7 of the draft Information Memorandum ignores the bidder's activity points in the relaxed primary bid round and instead carries forward the bidder's eligibility points from the previous round. eircom Group asserts that this treatment of activity and eligibility points is completely inconsistent with eligibility point-based activity rules implemented in previous spectrum auctions (both SMRAs and CCAs);
- The proposed introduction of binding supplementary bids described in the draft Information Memorandum (and illustrated in the example provided in Annex 7) is arbitrary and incoherent. eircom Group considers that it should be substantially modified or withdrawn in the final Information Memorandum; and
- Section 3 of Annex 8 did not appear to account for situations where the bidder's final primary bid is a relaxed primary bid. It stated that it is concerned that a bidder who places a relaxed primary bid in the final primary bid round and is subject to a relative cap in the supplementary bids round may not be able to place bids that guarantee it will win its final primary package. It noted that it is important that this point be fully addressed in the final Information Memorandum.

4.6.2.3 Technical points raised in relation to Relaxed Primary Bids

4.216 In support of its comments in relation to the example provided in Annex 7 of the draft Information Memorandum, eircom Group submitted a comprehensive report prepared on its behalf by Power Auctions considering the proposals put forward in Document 11/75.

4.217 Power Auctions was quite supportive of the basic changes proposed to the activity rules relative to the standard CCA, and in its submission suggested a number of minor modifications. While Power Auctions supported the implementation of the final price cap, it asserted that Binding Supplementary Bids impose a "*penalty*" on bidders making a Relaxed Primary Bid even though the bid is derived from consistent bidding with a fixed set of valuations, stating that "*[u]nless ComReg can both communicate a valid rationale for Binding Supplementary Bids and devise a consistent and coherent way to implement the concept, ComReg would do better to substantially modify or withdraw this part of the proposal in the final Information Memorandum.*"

4.218 Power Auctions argued that Eligibility in round N+1 should be the lower of Eligibility and activity in round N. It also set out some alternative recommendations on the rules presented by DotEcon as follows:

- A bidder can make a relaxed primary bid if this satisfies revealed preference with every prior round's bid in which eligibility was reduced; and
- Supplementary bids larger than the final primary package (in terms of eligibility points) should be capped relative to all bids in eligibility point-reducing rounds.

4.219 A number of specific technical points were set out in the report by Power Auctions and these are addressed in DotEcon's report at Section 2 of Document 12/51.

4.220 Subsequently, in its submission of 13 April H3GI provided the following comments on eircom Group's submission:

- At page 3 of its supplementary submission, H3GI agrees with Power Auctions' point regarding a claimed deficiency in the pricing algorithm with party-specific lots as discussed in Document 12/24. H3GI submits that "*This point needs to be fully clarified in the final Information Memorandum*".
- H3GI also agrees with Power Auctions' point in relation to the treatment of Eligibility points following a Relaxed Primary Bid (page 4 of its supplementary submission). It considered that the proposed Eligibility point rule in Document 11/75 may "*...allow for some strange or undesired bidding behaviour. For example, a bidder may completely abandon one time slice for a couple of rounds by submitting Relaxed Primary Bids for a large package that only contains one time slice and then reappear in the other time slice at a later point. Such 'snipping behaviour' cannot be ruled out as unlikely given the value difference between time slice 1 and 2.*"

4.221 However, at page 4 of its supplementary submission of 13 April, H3GI states that it does "*not fully agree with Power Auctions' observations in respect of Binding Supplementary Bids*" and that if they are removed from the current rules without any other changes it "*...may cause incentive problems*". It claims that removing the Binding Supplementary Bids rule implies that Bids can be made for much larger packages without any requirement of consistency with 'revealed preferences' for all the other rounds in which the bidder dropped Eligibility. It further claims that if removing the Binding Supplementary Bids then one should opt for Power Auctions' proposed activity rule for the clock rounds.

4.222 At page 5 of the same supplementary submission, H3GI states that it “...*would also argue for the current [ComReg’s proposed] rule rather than Power Auctions’ proposed ‘Simplified RP Cap’*. In practice, the difference is likely to be small but *Power Auctions’ proposal is more complex – it requires comparison of prices for a number of rounds rather than just for one round*”.

4.6.2.4 Other general and specific technical questions on rules

4.223 Vodafone also submitted a list of questions seeking confirmation of its understanding of specific elements of the proposed activity rules.⁷⁴ Further, Vodafone stated that if ComReg “*wants to produce the results of an SMRA*” (simultaneous multi-round auction) it could do so by just running an SMRA (and not a CCA with the proposed activity rules).

4.224 Telefónica also submitted a list of questions seeking clarification of its understanding of specific elements of the proposed activity rules. At pages 20 and 21 of its submission to Document 11/75, Telefónica noted that “...*[m]ost of the increase in complexity appears to stem directly from the multiple time slice and party specific lots approach*”.

4.225 In addition at page 2 of its supplementary submission on Document 11/75 (see Document 12/21), Vodafone suggests an alternative form of wording for paragraph 4.146 of Document 11/75 as follows:

- “*Supplementary Bids for all packages whose eligibility exceeds the bidder’s eligibility at the end of the final primary round are subject to a Relative Cap.*”

4.226 Vodafone contends that such a change is necessary in order to capture ComReg’s intended price cap rule in the situation where a Bidder submitted a Relaxed Primary Bid in the final round.

4.6.3 Summary of DotEcon’s views

4.227 At section 2.5 of Document 12/51 DotEcon considers and sets out its assessment and response to these submissions providing answers to the specific questions (see also subsection 2.8 therein).

⁷⁴ The questions including those set out in Vodafone’s supplementary submission of 11 April are responded to at Section 2.8 of Document 12/51.

4.6.3.1 Claims that activity rules are too complex

4.228 In relation to the claim raised by Vodafone (including its proposal to remove Relaxed Primary Bids) and Telefónica in its submissions that the Auction was 'overly' complex, DotEcon makes several key points inter alia as follows:

- The main body of the rules proposed for the Auction are unchanged relative to early auction proposals for a CCA;
- The current set of activity rules has been driven by past responses to this consultation process;
- In any case, there is no requirement for a bidder to make a Relaxed Primary Bid at any point. A Bidder may choose never to make such a Bid in which case its decisions during the Auction are governed by activity rules not involving the Relaxed Primary Bids; and
- The rules proposed for the Auction are advanced but not that novel. In particular, DotEcon notes that similar rules have been proposed for the multi-band auction in the UK (albeit for different reasons).

4.229 DotEcon believes that the activity rules proposed for the Auction are reasonable from a complexity perspective, appropriate to ensure the achievement of ComReg's objectives for the award and a necessary element of the auction design.

4.230 DotEcon reminds interested parties that ComReg Documents 12/24 and 12/25 already addresses Telefónica's call to remove the two time slice proposal and early liberalisation option from the Auction as a means to reduce 'complexity'.

4.231 At Section 2.6 in Document 12/51 DotEcon also highlights two features of the EAS which are relevant in considering claims of auction complexity:

- *"During a primary bid round, if a bidder were to be eligible to make a relaxed primary bid on a package of interest, it would be made aware of this by the electronic auction system. If the bidder then entered a relaxed primary bid on the bid form (where this step is non-committal), the electronic auction system would present to the bidder all of the chain bids (if any) it would be required to make at the same time as the relaxed primary bid, at the minimum level required in order to preserve its relative preferences as expressed in its previous bids.*

- *The electronic auction system would provide a dynamically updated supplementary bids editor. At any time during the primary bid rounds, a bidder would be able to view through this supplementary bids editor the existing constraints on further bids on packages bid on during the auction so far. It would be able to enter packages into the supplementary bids editor and the caps relevant to that package would be generated. The supplementary bids editor would be updated to reflect bids submitted in the primary bid rounds once the result of rounds are released. “*

4.6.3.2 Relaxed Primary Bids and implications

4.232 In relation to the view by Vodafone that Bidders might become unable to express their preferences properly, leading to an outcome which would be inefficient, DotEcon believes that bidders should be able to avoid finding themselves constrained in a way that would prevent them from expressing their relative demand for alternative packages of lots in this Auction.

4.233 In coming to its view DotEcon has carefully considered all the material and submissions before it, the examples showing the constraints on Bidding, the operation of the Final price cap rule, and its own assessment of claims that the activity rules are complex.

4.234 DotEcon notes eircom Group’s support for a final price cap and to allow Eligibility point exceptions on the basis that they are consistent with revealed preference constraints. However, as regards eircom Group’s proposals (set out by Power Auctions in its report) for implementing similar rules with modifications, DotEcon does not find these proposals to be suitable in the circumstances and states at Section 2.7 the following key points on same:

- *“...However, we do not consider that the alternative approach proposed by Power Auctions is preferable. In particular:*
- *we believe that the approach put forward imposes tighter constraints on bidders during the primary rounds with regard to updating their valuations during the open stage;*
- *the more restrictive nature of the proposed rules also mean that reductions in eligibility may tighten the caps on packages that exceed the bidder’s eligibility, potentially limiting the ability of bidders to submit relaxed primary bids in subsequent rounds and adding complexity to bid submission decisions in the primary rounds;*

- *at the same time, the activity rules proposed for the supplementary round (although unclear in their current form) would appear to either*
 - *leave scope for bidders to avoid some of the constraints that result from reductions in eligibility during the primary rounds, which in turn could allow bidders to bid strategically to increase rivals costs and to omit bids for constraining packages that might otherwise be selected as winning bids in an efficient allocation; or*
 - *simply defer the consequences of submitting relaxed bids to the supplementary round, which could lead to bidders failing to anticipate the consequences of their actions, and to applying relative caps in an inconsistent manner depending on which packages bidders submit supplementary bids for – this might distort the incentives for bidders to bid for a comprehensive range of options in the supplementary bids round to reflect their valuations. ...”*

4.6.3.3 Technical points raised on Relaxed Primary Bids

4.235 In relation to various technical points raised by Power Auctions on Relaxed Primary Bids, DotEcon responds as follows:

- DotEcon agrees that these activity rules depart from the conventional use of eligibility points-based activity rules in previous auctions. It states at Section 2.6 that “...*relaxed primary bids are not arbitrary but represent an exception to the eligibility points constraint on bidding in specific circumstances but meet a more flexible criterion, that is, harmony with relative preferences as expressed in previous rounds.*”;
- Further, DotEcon notes that the calculation of chain bids is not arbitrary, and it considers that “...*the example included in sub-section 2.2.2 above [see 2.2.2 of Document 12/51) makes clear a number of features of the proposed activity rules, including how the value of chain bids, where necessary, are calculated and the effect of the final primary package being a relaxed primary bid.*”

4.236 DotEcon, having considered all the material before it including the suggestions set out in Power Auctions’ report, sets out its opinion as follows:

- Regarding Power Auctions’ claim that chain bids impose a penalty on bidders making a relaxed primary bid even though the bid is derived with a fixed set of valuations, DotEcon refers the reader to the example set out in sub-section

2.2.2 above. This example shows how a bidder with a fixed set of valuations can bid in line with these valuations even when submitting a relaxed primary bid and the associated chain bids that the relaxed primary bid would necessitate.

- Regarding Power Auctions' recommendation regarding the calculation of eligibility, DotEcon agrees that this is a useful step. Whilst it does introduce some minor complications (which Power Auctions did not consider), this is manageable and outweighed by the benefit of discouraging misstatement of demand if a bidder makes an RPB.
- Power Auctions' alternative proposal implementing its recommendations relating to how caps on relaxed primary bids and supplementary bids would be implemented is discussed in Section 2.7. Whilst this approach is simpler to implement, it is more restrictive on bidders' decisions. DotEcon considers that the novel features of the auction (i.e. RPBs) should, as far as possible, be optional for bidders and provide additional flexibility, rather than it being a necessity to use them in order to implement a reasonable bid strategy.

4.237 DotEcon considers H3GI's comments in relation to the treatment of its detailed consideration of the Power Auctions' proposed rules (also set out in Section 2.7 of Document 12/51) provides further clarity on H3GI's point in relation to the differences between the two sets of activity rules and why in DotEcon's view, the proposed rules are appropriate for the Auction.

4.6.3.4 Response to specific technical questions

4.238 DotEcon sets out its response to all specific technical questions at Section 2.8 of Document 12/51.

4.6.3.5 Additional views on Activity Rules, including specific views and response to Power Auctions' proposals on same

4.239 DotEcon also sets out a small number of refinements that it proposes relative to the activity rules presented in the draft Information Memorandum in the following two areas:

- The rule for Eligibility carried forward to the next primary round when a Relaxed Primary Bid is made; and
- The ability of Bidders with zero Eligibility to submit Relaxed Primary Bids.

4.240 Interested parties are referred to Section 2.3.1 of Document 12/51 for a discussion of the refinements presented, including on how the submissions to Document 11/75 led DotEcon to currently propose them.

4.6.4 ComReg's Assessment

4.241 In relation to the technical matters on activity rules as discussed below, and given the specialised nature of these, it should be noted that ComReg's assessment is guided by the expert opinion of DotEcon, and its analysis of all of the material before it, as discussed in detail in Document 12/51.

4.6.4.1 Claims that activity rules are too complex

4.242 ComReg agrees with DotEcon's assessment of claims made concerning the complexity of the activity rules. In particular ComReg considers that DotEcon's assessment more than adequately addresses the concerns voiced by interested parties, and ComReg notes that:

- The main body of the rules proposed for the Auction are unchanged relative to ComReg's early auction proposals for a CCA. In this regard ComReg believes that the substance of the rules are appropriate for this CCA;
- The current set of activity rules has been informed by past responses made by interested parties, particular the four current mobile network operators. In this regard, ComReg is satisfied that the proposals have been developed in a progressive and iterative manner throughout the consultation process;
- there is no requirement for a Bidder to make a Relaxed Primary Bid at any point in the Auction to be particularly relevant. The Relaxed Primary Bid provides the flexibility sought by some respondents but is not obligatory in any manner; and
- the rules proposed for the Auction are not that entirely new, albeit they are advanced and DotEcon points out that similar rules have been proposed for the multi-band auction in the UK (albeit for different reasons).

4.243 By its nature a multi-band CCA auction will entail some complexity but this of itself is unlikely to be beyond the capabilities of the interested parties. ComReg maintains that the activity rules proposed for the Auction are reasonable and appropriate to ensure the achievement of its objectives for the award and proportionate.

- 4.244 As Documents 12/24 and 12/25 have already addressed Telefónica's call to remove the two time slice proposal and early liberalisation option from the Auction, and as there was no additional or new material made in this proposal, ComReg does not consider this proposal further here.
- 4.245 ComReg notes that the EAS would make a Bidder aware of the Relaxed Primary Bid facility and would present a Bidder with all of the chain bids (if any) required to be made at the same time as any Relaxed Primary Bid.
- 4.246 Further ComReg notes that the EAS provides dynamic / updated information through the supplementary bids editor. At any time during the primary bid rounds, a Bidder would be able to establish the constraints placed on further auction bids using the supplementary bids editor. The supplementary bids editor would also be updated to reflect bids submitted in the Primary Bid Rounds once the results of rounds are released.
- 4.247 In light of the above, and of DotEcon's assessment and response, ComReg believes Bidders should be more than capable to avoid inadvertently constraining themselves in a way that would prevent them from expressing their relative demand for alternative packages of lots in this Auction.
- 4.248 Further, ComReg notes that there will be Mock Auctions and a further opportunity to submit questions and receive answers prior to the commencement of the Auction. Having regard to the above, ComReg rejects claims that the rules of the Auction are 'overly' complex.

4.6.4.2 Relaxed Primary Bids and implications

- 4.249 In relation to the argument put forward by Vodafone that Bidders might somehow become unable to express their preferences properly, ComReg refutes the claim for the following reasons:
- The Auction is designed to cater for all levels of demand, including relative demand for alternative packages of lots;
 - Bidders do not have to submit Relaxed Primary Bids, but can do so in line with the rules, which are explained in significant detail through additional examples set out in Document 12/51. There will be mock auctions and further opportunities to submit queries on the Auction prior to the commencement of the Auction; and
 - Although the rules depart from conventional Eligibility-points activity rules they do so to provide Bidders with flexibility to express relative demand for

alternative packages of lots. Similar rules are being proposed in other upcoming CCA auctions.

4.250 ComReg notes eircom Group's support with its proposals for a final price cap and to allow Eligibility point exceptions on the basis that they are consistent with revealed preference constraints. However, as regards eircom Group's proposals (set out by Power Auctions in its report) for implementing similar rules with modifications, ComReg notes and agrees with DotEcon's extensive consideration and assessment, which is set out at Section 2.7 and at paragraph 4.234.

4.6.4.3 Technical points raised in relation to Relaxed Primary Bids

4.251 In relation to various technical points raised by Power Auctions with regard to the Relaxed Primary Bids, ComReg notes the following relevant points made by DotEcon:

- While the activity rules depart from the conventional use of eligibility points-based activity rules in previous auctions, at Section 2.6 of Document 12/51 DotEcon also considers that *"...relaxed primary bids are not arbitrary but represent an exception to the eligibility points constraint on bidding in specific circumstances but meet a more flexible criterion, that is, harmony with relative preferences as expressed in previous rounds."*;
- Further, the calculation of chain bids is performed by the EAS and additional examples should assist interested parties understanding of same. In particular DotEcon considers that *"...the example included in sub-section 2.2.2 above [see 2.2.2 of Document 12/51] makes clear a number of features of the proposed activity rules, including how the value of chain bids, where necessary, are calculated and the effect of the final primary package being a relaxed primary bid."*

4.252 In light of the foregoing, and of the detailed assessment undertaken by DotEcon in particular at Section 2.7 of Document 12/51 ComReg notes and accords with the relevant conclusions set out by DotEcon (see section 2.7 of Document 12/51)

4.6.4.4 Other general and specific technical questions

4.253 ComReg does not repeat DotEcon's assessment and response to the general and specific technical questions. Interested parties are referred to Section 2.8 of Document 12/51 for a discussion of the matters presented.

4.254 ComReg notes that all technical matters raised have been assessed and considered carefully by DotEcon. Included in its observations set out in Section

2.7 of Document 12/51, DotEcon assesses whether or not respondents' suggestions are helpful and could lead to improvements of the pricing method or whether or not there might be limitations of same and if so, whether these have been considered in the relevant submissions.

4.255 ComReg accords with DotEcon's extensive technical analysis of Power Auctions proposals, and believes that it provides sufficient detail for the final activity rules for the Auction.

4.6.5 ComReg's final position in the Information Memorandum

4.256 Having taken into account its statutory objectives, respondents' views and DotEcon's advice and recommendations, ComReg considers it appropriate to adopt the activity rules set out in the Final Information Memorandum.

4.7 Winner determination and pricing method

4.257 This section discusses the winner determination and pricing method to be used in the Auction.

4.7.1 Overview of ComReg's position in Document 11/75

4.258 A formal mathematical description of the process of winner and price determination to be used in the Auction was set out in Annex 8 to Document 11/75, see also subsections 4.4.4 and 4.4.5 therein.

4.259 At subsection 4.3.4 in Document 11/75 an overview of the process to select Winning Bids through the employment of an methodology on the basis of "*...maximising the total value of Winning bids, subject to accepting at most one Bid from each Bidder and ensuring that Winning Bids and ensuring that the Winning Bids can be satisfied from the available spectrum*" called Winner Determination was outlined (see paragraph 4.50 therein).

4.260 Interested parties will recall that at Section A.1 of Annex A to Document 12/24 DotEcon, ComReg's expert advisors on the issues related to the award of spectrum in multiple bands in Ireland, stated that "*...in considering responses received to Document 11/75, we have identified a deficiency in the detail of the pricing algorithm described*"⁷⁵. This has been subsequently addressed by ComReg and its advisors in Annex A.1 of Document 12/24 which sets out additional simple examples of the pricing method with party-specific lots.

⁷⁵ See paragraph 398 on page 106 of Document 12/24.

4.261 At paragraphs 4.180 to 4.182 of Document 11/75 ComReg set out further rules that would apply in the event of a tie-breaking situation occurring, these rules were as follows:

- *“In the event that there are multiple feasible notional release scenarios with equal greatest total value, then the Winning Scenario will be selected from amongst these tied winning scenarios. First, the Winning Scenario must maximise the number of MHz of spectrum subject to winning Party-specific Bids from amongst the tied scenarios. Second, if ties still remain, this will be resolved by random selection of a Winning Scenario from amongst the remaining ties by the EAS.*
- *Given the Winning Scenario, if there is just one potentially winning combination of Bids, this is the **Winning Combination**.*
- *If there is more than one potentially winning combinations of Bids in the Winning Scenario, then one of these will be chosen at random by the EAS. This will be the Winning Combination.” [emphasis added]*

4.7.2 Summary of Respondents’ views

4.7.2.1 Winner determination and pricing method

4.262 Vodafone made several specific points in relation to the pricing method as follows:

- At subsection 3 of its supplementary response to Document 11/75, dated 12 March 2012, on ‘Adding liberalised lots to the spectrum supply when calculation opportunity costs’ (see Document 12/21), Vodafone claims there is *“...a change in the way that the minimum total price is computed for each subset of winning bidders”*. Vodafone requests ComReg to consider the rule again including setting out the rationale and reasoning for it. In particular it asks ComReg to confirm that, under the rules, the supply of generic lots is not increased by the number of liberalised lots when computing the opportunity cost for a subset of winning bidders.⁷⁶;
- In addition at subsection 2 of the same supplementary response to Document 11/75 on ‘Additional Lots for Sale can lead to a Lower Value

⁷⁶ Vodafone states the following *“Can ComReg explicitly confirm that, under the new rules, the supply of generic lots is not increased by the number of liberalised lots when computing the opportunity cost for a subset of winning bidders? If so, is the reason for this change as we have described – to avoid the possibility of negative opportunity costs?”*

Outcome' Vodafone claims to have uncovered a "*surprising property of the auction design, which arises because of the opportunity for incumbent operators to bid to liberalise existing holdings*". In particular, Vodafone sets out a simplified example illustrating what it means by lower value outcome. In summary examines two Bidding scenarios; one with two lots available and another with three lots available and in both scenarios three Bidders including an existing GSM licensee. It contends that the total value of the winning bids is lower when there are more lots available⁷⁷:

- Further, at subsection 4 of the same supplementary response to Document 11/75 on Algorithms for Winner and Price Determination, Vodafone provides views on what it considers to be an equivalent algorithm which it claims "*is in general much faster*". Vodafone does not suggest that this algorithm be implemented by ComReg and merely provides it for information.

4.263 In turn a further respondent, H3GI, submitted its own assessment of Vodafone's supplementary submission. In its supplementary submission of 13 April to Document 11/75, H3GI provided views on Vodafone's points.

4.264 For example in assessing Vodafone's point at subsection 2 of its submission, H3GI is of the view that Vodafone is mistaken in its assessment that additional lots for sale can lead to lower value outcome. H3GI submits the following reasons to support its position on Vodafone's claims as follows:

- "*The mistake in Vodafone's argument lies in measuring auction success by the total value outcome. If the aim were to maximise the total value outcome, ComReg should let all existing licences holders liberalise (i.e. buy) their party specific lots at whatever price they are willing to pay. This would increase the total value outcome because all party-specific lots would be sold, but it would violate fairness as existing licences holders would be allowed to purchase frequencies at a lower price than other bidders*"; and
- "*...If a bidder does not bid enough for her own party-specific lots to win them in the hypothetical situation where she is in open competition for the lots with other bidders, she should not be allocated the party-specific lots.*

4.265 Further H3GI claims that it would agree with Vodafone's point set out in subsection 3 of its submission, namely that the uncertainty regarding the treatment of party-specific lots in the 're-optimisation' across bidders should be resolved by ComReg in the final Information Memorandum.

⁷⁷ Vodafone states the following "*Can ComReg confirm that all unsold lots (including unsold party-specific lots) need to be counted when calculating the knockout bid?*"

4.266 At page 8 of its submission to Document 11/75 eircom Group claims that the winner determination and pricing procedures are incomplete and stated the following:

- *“The technical description of the winner determination and pricing procedures is not complete and falls short on some very important implementation details. It is not possible to determine based on Section 4.4.4 and Annex 8 of the draft Information Memorandum how the coalition values will be determined which directly affects opportunity costs (prices). The main Section 4.4.4 provides a general description of how prices are determined and has a sentence that vaguely describes how the opportunity costs should be calculated (paragraph 4.185). A more detailed description of how prices will be determined was included in Section 10.3.2 of ComReg 11/58. Full details regarding how the winner determination and pricing procedures will be calculated should be included in Section 4.4.4 and Annex 8 of the final Information Memorandum.”*

4.267 In its supplementary submission to Document 12/25 of 2 May 2012, Telefónica requests ComReg to clarify that where party-specific lots are to be liberalised, the liberalising Bidder would be entitled to a rebate of licence fees as illustrated in Table 4 of Document 12/25. Further it requests ComReg to clarify the opportunity cost of denying a Bidder liberalising its party-specific lots and to confirm that this would be calculated by reference to the value of the bid denied, minus the associated rebate.

4.7.2.2 Tie-breaking

4.268 At section 5 of its submission to Document 11/75 Telefónica examines a possible tie-break situation, and notes that paragraph 4.180 of Document 11/75 prioritises between notional release scenarios according to the greatest number of released lots. It also notes however, that according to paragraph 4.182, within a winning release scenario, a purely random process is used to identify the winning combination from amongst those combinations with equal highest value. Telefónica seeks clarification on the following point in relation to tie-breaking:

- *“...that only winning combinations in which bidders win the requisite number of party-specific lots will be included in this random selection. Put differently, please clarify that combinations that include zero bids (by a releaser) within the winning scenario will be discarded, even if they have equal value to potential winning combinations in which there are no such zero bids (from a releaser).”*

4.7.2.3 Other relevant views: 'Knock out' Bids

4.269 In addition, in its supplementary response to Document 11/75 on 13 April, Telefónica submits concerns in relation to the 'knock-out' bids facility in the Auction as follows⁷⁸:

- *"...in this particular auction the presence of a large number of party specific lots (2x900MHz, and 9x1800 MHz) in the first time-slice can have the effect to inflate the knock-out bid significantly and could increase the value of a knock-out bid beyond a bidder's valuation or budget"*:
- *"The true value of a knock-out bid may be significantly less than the worst case, as lack of eligibility or relative caps might reduce the overall value of uplift to the final primary package that is required. However, as Telefonica understands ComReg's proposal, no information regarding eligibility/activity for party specific lots will be revealed to bidders, so they must assume the worst case when calculating the knock-out bid. ... "*; and
- *"The absence of this information unnecessarily increases the bid that any bidder must place in order to be sure to win their final primary package, and could lead to a wrong decision being taken at the supplementary bidding stage"*.

4.7.3 DotEcon's views

4.7.3.1 Winner determination and pricing method

4.270 At Section 5 of Document 12/51, DotEcon sets out its assessment and commentary on respondents' views in relation to winner determination and pricing method, and tie-breaking.

4.271 In relation to the first point made by Vodafone referred to at paragraph 4.262 above concerning the computation of the opportunity costs for a subset of winning bidders, DotEcon confirms that this point has been addressed in paragraph 261 of Document 12/24 and does not comment further on the matter in its current Document 12/51. DotEcon does however set out some further explanation on its 're-optimisation recipe' including providing additional examples to explain the pricing method and a slight modification of same (see below).

⁷⁸ On 5 March in an email to ComReg, (this published at Document 12/49) Telefónica asked "Can ComReg confirm that all unsold lots (including unsold party-specific lots) need to be counted when calculating the knockout bid?"

4.272 In relation to the second and third points by Vodafone also referred to at paragraph 4.262 above, DotEcon notes at Section 5.1.2 of Document 12/51 two points:

- First, *“...this feature is present to ensure that bidders wishing to gain party specific lots only win if they are willing to pay a price that would otherwise be achieved on the open market. We do not consider that the outcome of the auction under this rule would lead to ‘counter intuitive and unsatisfactory outcomes’; and*
- Second, that H3GI’s assessment of Vodafone’s submission, which is set out at page 2 of its supplementary submission of 13 April, also finds issue with Vodafone’s above claims. H3GI states that *“...The mistake in Vodafone’s argument lies in measuring auction success by the total value outcome...”*. Further, DotEcon noted that H3GI states therein that *“... If a bidder does not bid enough for her own party-specific lots to win them in the hypothetical situation where she is in open competition for the lots with other bidders, she should not be allocated the party-specific lots”* and does not disagree with H3GI’s assessment in that regard.

4.273 In relation to the views set out in the report prepared on behalf of eircom Group by Power Auctions, DotEcon provides its assessment and response to same at Section 2.7 of Document 12/51. DotEcon’s assessment in this section is across all matters raised by Power Auctions. In relation to the specific point made by eircom Group as regards the ‘completeness’ of the pricing procedures, DotEcon responds as follows *“...Full details regarding how the winner determination and pricing procedures will be calculated should be included in Section 4.4.4 and Annex 8 of the final Information Memorandum”*. Those ‘full details’ are set out in the Information Memorandum, which this document accompanies and in particular, DotEcon includes a technical Annex (at Annex 8) outlining further details on the winner determination and pricing method.

4.274 In relation to Telefónica’s request for further clarification as regards the opportunity costs calculation set out in its supplementary submission to Document 12/25 of 2 May 2012, DotEcon has considered the request (and worked example provided by Telefónica) and addresses it in Section 5.1.2 of the Document 12/51. Therein, DotEcon sets out necessary additional clarifications on the calculation of the opportunity costs associated with a set of winners in a further simple example and makes the following point in relation to Telefónica

- *“Turning then to Telefonica’s question, we note that if a bidder A denies another bidder, bidder B, the liberalisation of a particular combination of lots,*

bidder B's unsuccessful bids for this particular combination of liberalised lots will not be taken into account when determining bidder A's opportunity cost in this particular example. This is because bidder A has rendered the notional release scenarios which are related to this particular combination of liberalised lots infeasible as it prevents bidder B from winning back its lots on a liberalised basis. In general, only feasible notional release scenarios will be taken into account when (joint) opportunity cost is determined."

Technical refinement of the winner determination and pricing method

4.275 Having considered and addressed respondents views as summarised above and taking into account requests for additional details and clarity in relation to the implementation of the pricing method, DotEcon sets out at Section 5.1.2 of Document 12/51 a technical refinement of the pricing method⁷⁹ which it concludes "...[should] better reflect the opportunity cost for a set of winners".

4.276 In addressing the issues raised on the winner determination generally, DotEcon states at Section 5.1.4 of Document 12/51 the following:

- *"...A technical description of this update to the price determination will be available in a technical annex to the Information Memorandum; and*
- *In order to allow interested parties to familiarise themselves with the winner and price determination for the main stage of the auction, we will make available a beta version of the winner and price determination software on ComReg's website."*

4.7.3.2 Tie-breaking

4.277 In addressing Telefónica's request for clarification as regards the process of tie-breaking, DotEcon sets out at Section 5.3.1 the following:

- In the event of a number of tied winning outcomes, a selection would be first made to maximise the number of bidder-specific lots awarded. If ties still remained, they would be broken randomly; and
- *"...a secondary tie-breaking criterion would be used, which is to maximise the number of bidders receiving packages containing at least as many lots in each category as their final primary bids. If ties still remained, they would be broken randomly."*

⁷⁹ In particular DotEcon makes a refinement to the 're-optimisation recipe', see Section 5.1.2 of Document 12/51 for a discussion of the issues presented.

4.7.3.3 'Knock-out' Bids (in Supplementary Bids Round)

4.278 In relation to queries posed by Telefónica on the 'knock-out' bids facility, DotEcon sets out at Section 7.3.2 of Document 12/51 the following relevant points:

- *"In response to Telefonica's question regarding the need to confirm that all unsold lots (including unsold party-specific lots) need to be counted when calculating the knockout bid, we can confirm that this is the case. While Telefonica consider that "no information regarding eligibility/activity for party specific lots will be revealed to bidders, so they must assume the worst case when calculating the knock-out bid" we note that at the end of the final primary bid round, and prior to the supplementary bids round, bidders will be notified of the demand on each party-specific lot. Further, aggregate demand in each of the regular categories is released to all bidders at the end of each primary bid round. In combination, this means that all the information necessary for following the strategy discussed in Section 2.4 will be available to bidders ahead of the supplementary bids round. However, bidders should keep in mind the possibility of a deposit call after the supplementary bids round that could change the situation with regard to the effective number of unallocated lots at the end of final primary round if a bidder is eliminated due to failure to top up its deposit.*
- *While Telefonica calls for more details of bids on party-specific lots, there is no clear benefit to releasing information about bids placed for party specific-lots on a round by round basis and considerable risk that this may permit tacitly coordinated behaviour, signalling or other gaming. By taking such an approach, limited information regarding bidder strategy during the primary bid rounds would be maintained, however there does not seem to be any apparent benefit to revealing this information and it is not necessary for applying the formula outlined in the Draft IM for the knock-out bid strategy. Given that such information is specific to individual parties, revealing a complete set of party-specific bids in each round of the auction could give a clear indication of individual bidder strategy. By revealing only the demand for party-specific lots in the final primary bid round, following the closure of the primary bid rounds, we strike a balance between providing the necessary information to allow bidders to follow the proposed 'knock-out strategy' while minimising the amount of information regarding specific bid strategies that is released during the auction that may otherwise prevent an efficient outcome.*
- *Section 3 of Annex 8 of the draft Information Memorandum discussed the impact of the final price cap for bidders seeking to win their Final Primary*

Packages in the Supplementary Bids Round. Section 2.4 updates this analysis to the case of a final RPB. While the analysis provided may aid bidders' consideration of appropriate bidding strategies there was no warranty or representation that any strategy suggested would be necessary or sufficient to ensure winning.

4.7.4 ComReg's Assessment

4.279 In relation to the technical matters on winner determination and pricing method as discussed below and given the specialised nature of these, it should be noted that ComReg's assessment is guided by the expert opinion of DotEcon, and its analysis of all of the material before it, as discussed in Document 12/51.

4.7.4.1 Winner determination and pricing method

4.280 In relation to Vodafone's claim that additional lots for sale can lead to a lower value outcome ComReg notes DotEcon's views set out in Section 5.1.2. that *"...to ensure that bidders wishing to gain party specific lots only win if they are willing to pay a price that would otherwise be achieved on the open market"* is an important construct of the Auction design. ComReg considers that this construct is necessary to give effect to the efficient running of the Auction and that proceeding without a requirement to pay a price that would otherwise be achieved in the open market unduly advantages Bidders wishing to gain party specific lots. ComReg therefore notes that Vodafone's comment could be an appropriate auction outcome. Additionally, ComReg notes and welcomes the points made by H3GI in its assessment of the correctness of Vodafone's claims.

4.281 In relation to Vodafone's request that ComReg reconsider the method of calculating the opportunity costs for a subset of winning Bidders, ComReg finds DotEcon's response on same, namely that it has addressed this request in Document 12/24 (see paragraph 261) to adequately clarify the matter. As a result ComReg does not provide further detail on this specific point but directs interested parties to the relevant Sections and examples set out in the final Information Memorandum (see for example additional detail set out in Section 5.1.2. of Document 12/51).

4.282 In particular ComReg notes that DotEcon further explains the 're-optimisation recipe' as part of providing additional worked examples of the pricing method used to define opportunity costs for a set of Bidders.

4.283 ComReg also notes the request for additional clarifications and worked examples of the pricing method noting other respondents submissions such as H3GI's,

where it agreed with Vodafone's point in relation to the treatment of party-specific lots in the 're-optimisation' across Bidders. ComReg considers DotEcon's additional explanation in Section 5.1.2. of Document 12/51 addresses these points.⁸⁰

4.284 In relation to eircom Group's submission, and in particular the report submitted on behalf of eircom Group by Power Auctions, ComReg notes DotEcon's detailed analysis of each of the points highlighted by Power Auctions. As regards the point made that the details of the pricing procedures be made available by ComReg, ComReg considers the point is now addressed by DotEcon at Section 2.7 of Document 12/51 and in so far as the point relates to the Activity Rules (and final price cap) this is also included in the Annex C of Document 12/51.

Technical refinement of winner determination and pricing method

4.285 In relation to DotEcon's proposed refinement of the winner determination and pricing method as set out in Section 5 of Document 12/51 ComReg, notes that this technical refinement is welcome and can be adopted without altering the substance of the winner determination and pricing method. Having regard to DotEcon's description and indeed the examples put forward by it to support the proposed technical refinement, ComReg believes this should lead to improved clarity as regards the pricing method conducted through the 're-optimisation recipe' originally set out by DotEcon.

4.286 ComReg welcomes the proposed refinement therefore as acceptable and notes the following points in arriving at this view

- DotEcon has carefully addressed respondents concerns as regards clarity over the pricing method and has provided further detail on same (see Document 12/51);
- There are additional specific examples set out to explain the winner and pricing method in Section 5.0 and Vodafone's and Telefónica's queries are addressed;
- Where appropriate, DotEcon has highlighted deficiencies in Power Auctions' submission and provided a balanced assessment of its suggestions; and

⁸⁰ ComReg notes that other features such as mock Auctions, pre auction access to Winner and Price Determination software and availability of various manuals to assist understanding of the Bidder interface can also be used to assist clarify matters for interested parties.

- Further, the points submitted by respondents have been carefully assessed by DotEcon and those suggestions that would lead to improvements in the pricing method have been adopted.

4.287 Having given full regard to the matters summarised above, ComReg is satisfied that the technical refinement proposed to the winner determination and pricing method proposals usefully enhances the Auction process and will be incorporated in the winner determination and pricing method in the final Information Memorandum.

4.7.4.2 Tie-breaking

4.288 ComReg notes Telefónica's request for additional clarification as regards the process of tie-breaking were such an event to occur. ComReg considers that DotEcon's commentary in subsection 5.1.3 addresses Telefónica's point.

4.289 In particular and with regard to DotEcon's proposal to "*...buttress the activity rules [with] a secondary tie-breaking criterion...*" ComReg finds this proposal provides useful additional clarity to respondents in the event of a tie-breaking situation occurring. In ComReg's view this, coupled with other proposals such as the conduct of a Mock Auction(s), access to Winner and Price Determination software prior to the auction and availability of the EAS handbook / manual, should lessen concerns enhance familiarity in relation to the operation of various features of the auction, including the operation of the tie-breaking facility.

4.7.4.3 'Knock out' bids (in Supplementary Bids Round)

4.290 In relation to the queries posed by Telefónica on the 'knock-out' bids facility, ComReg has considered DotEcon's assessment and commentary on same as set out in Section 7.3.2 in Document 12/51 and finds it to be particularly informative. ComReg also notes the following points:

- All information necessary for following the strategy discussed in Section 2.4 of Document 12/51 will be available to Bidders ahead of the Supplementary Bids Round. Additionally, Annex 9 of the Information Memorandum considers the implications of the final price cap in the Supplementary Bids round;
- Telefónica's call for more details on party-specific lots to be made available prior to the round is without any clear supporting reasons and in contrast there would be in DotEcon's view, "*...considerable risk that this may permit tacitly coordinated behaviour, signalling or other gaming*" (see section 7.3) particular as this information is specific to individual parties.

- Revealing only the demand for party-specific lots in the Final Primary Round minimises the amount of information regarding specific bidding strategies whilst providing the necessary information for Bidders to follow the proposed 'knock-out' bidding strategy, which, in ComReg's view, is preferable to Telefónica's proposal.

4.7.5 ComReg's Final Position in the Information Memorandum

4.291 Having taken into account its statutory objectives, respondents' views and DotEcon's advice and recommendations, ComReg considers that the refined winner determination and pricing methodology will be adopted and set out in the final Information Memorandum.

4.8 End of Auction Stage

4.292 Section 4.6 in Document 11/75 set out ComReg's position on the processes applying at end of the Auction. ComReg stated that after having "*...determined the Winning Bids for Lots in all Lot Categories and the Additional Prices for the Assignment Stage, the results of the Auction will be announced to all Bidders.*"

4.293 While ComReg notes that no respondent's views were submitted specifically in relation to this stage of the Award Process, section 4.2 of this document considers the information exchange between ComReg and the Bidders during the award process including this stage. In line with this position, ComReg is of the view that that the following information would be released to bidders and in tandem made public:

- the identity of the Winning Bidders;
- the frequency ranges awarded to each Winning Bidder;
- the frequency ranges retained as GSM spectrum rights in Time Slice 1, where applicable; and
- the Upfront Fee to be paid by each Winning Bidder, including a break-down of the Base Price and any Additional Prices for specific frequency assignments.

Chapter 5

5 Legal Terms and Conditions

5.1 ComReg's Position in Document 11/75

5.1 Chapter 5 of Document 11/75 provided detail on the legal terms and conditions that would be applicable to the Award Process. It clarified, amongst other things, the extent to which the contents of the draft and final Information Memorandum are binding on ComReg and Interested Parties.

5.2 Views of Respondents

5.2 In its response to Document 11/75, eircom Group takes the view that *“the disclaimers set out in Chapter 5 and the right of ComReg to amend the IM are drafted so broadly that they render the IM meaningless for Interested Parties to rely upon. Chapter 5 must be grounded on a more realistic and proportionate legal basis.”* In particular, eircom Group asserts that:

- paragraphs 5.4 and 5.6 seek to absolve ComReg and its agents from any responsibility for ensuring the adequacy, accuracy and completeness of the Information Memorandum and associated material. The breadth of the disclaimers in paragraphs 5.4 and 5.6 is unacceptable because they mean that the Information Memorandum will not place potential bidders in the position to establish whether they wish to proceed to participate in the Award Process and in the position to fully prepare for and understand the Award Process;
- paragraph 5.27 appears to seek to grant ComReg very broad discretion for any reason to step out of the process established by the Information Memorandum; and
- contrary to paragraph 5.15, ComReg must have legal obligations under the Information Memorandum.

5.3 In suggesting its deletion, eircom Group raises the following issues in relation to paragraph 5.7:

- contrary to paragraph 5.7(ii), if an amendment to the Information Memorandum is clearly required, Interested Parties are entitled to expect that it will be made;

- paragraph 5.7(iv) contradicts paragraph 3.3.3 of the draft decision set out in Chapter 8 of Document 11/60 and paragraph 3.97 of Document 11/60 by suggesting that Interested Parties may not rely on bidding in a particular manner to guarantee success; and
- paragraph 5.7(v) contradicts Regulation 6(15) of the draft Regulations concerning the assignment of rights and obligations of a Liberalised Use Licence and “renders it impossible for Interested Parties to form a view on the technologies they may deploy to exploit the spectrum”. This, in its view, makes it impossible for Interested Parties to form a reasonable view on the value of spectrum.

- 5.4 eircom Group notes that Chapter 5, in a number of places, provides for the possibility of amendments to the Information Memorandum once published (referencing paragraphs 5.11, 5.12 and 5.30). It takes the view that any amendments made should be necessary and exceptional. It also takes the view that any amendments or changes must be subject to appropriate consultation as necessary and subject to full disclosure to all Interested Parties, which, in its view, is not envisaged under paragraph 5.30. Similarly, it takes the view that the position in relation to oral variations under paragraph 5.5 should be clarified and, in particular, that Interested Parties will be made aware of such variations.
- 5.5 eircom Group requests that paragraph 5.25 be amended to require ComReg and its agents to promptly notify Interested Parties if it discovers any error or omissions or lack of clarity in the Information Memorandum.
- 5.6 eircom Group also requests that paragraph 5.16, which it believes contemplates some form of registration and verification process before an Interested Party may download the Information Memorandum, be clarified.
- 5.7 At paragraph 3.15 of its response to Document 11/75, Telefónica asserts that the Information Memorandum is structured in a one-sided way which, in its view, gives the impression that ComReg wants to have full flexibility while giving little commitment and which serves to undermine bidders ability to be precise about exactly what is being sold at the proposed auction.

5.3 ComReg’s Final Position on Legal Terms and Conditions

- 5.8 ComReg notes and has considered eircom Group’s comments on Chapter 5.
- 5.9 In response to its comments on paragraphs 5.4 and 5.5, ComReg would point out that the scope of the disclaimers contained in those paragraphs is clearly limited

to that permitted by law. ComReg further notes that such disclaimers are common in competition documents of this type and their purpose is to protect ComReg's interests in conducting a lengthy and complex award process.

- 5.10 ComReg disagrees with eircom Group's view that, as a result of the above disclaimers, the Information Memorandum will not place potential bidders in a position to establish whether they wish to proceed to participate in the Award Process and in the position to fully prepare for and understand the Award Process. ComReg would consider that the removal of these disclaimers would in no way enhance a potential bidder's understanding of the Award Process and, indeed, would be an inappropriate reason for otherwise reluctant bidders to choose to participate in the Award Process. Notwithstanding the inclusion of these disclaimers, ComReg would note that it has used significant endeavours to ensure that all award documentation is correct, up to date and sufficiently clear.
- 5.11 Furthermore, ComReg has afforded Interested Parties ample opportunity to analyse and comment upon the accuracy and clarity of the information contained in the Information Memorandum and has not denied or restricted any Interested Party the right to fully participate in the consultation process. Given the extensive resources and economic and technical expertise available to likely Interested Parties and the fully transparent nature of the consultation process to date - through which Interested Parties are also able to benefit and learn from the observations made by other Interested Parties - ComReg does not consider eircom Group's views to be credible in this regard. Equally, by proposing a questions and answers phase in addition to mock auctions, ComReg is confident that interested parties can test the feasibility of the Award Process mechanisms in advance of any auction.
- 5.12 ComReg therefore considers it reasonable and appropriate that such disclaimers be included.
- 5.13 ComReg notes and has considered eircom Group's comments on paragraph 5.27. In response, ComReg would point out that this paragraph begins with the statement that ComReg will act at all times to a standard expected of a public body and in line with its statutory duties and functions. It is normal for a statutory body to seek to avoid, to the extent permitted by law, fettering its statutory discretion and, in exercising any of the rights reserved in paragraph 5.27, ComReg must clearly act in accordance with its statutory objectives, functions and duties. In light of the concerns expressed by eircom Group in this regard, ComReg has amended paragraph 5.27 in the final Information Memorandum in certain respects.

- 5.14 In relation to eircom Group's comment on paragraph 5.15, ComReg agrees that the Information Memorandum is intended to be contractually binding on all parties and that ComReg will have contractual obligations under it to the extent provided for therein. ComReg would note that paragraph 5.15 was intended to be confined to the draft Information Memorandum only and has therefore amended this paragraph in the final Information Memorandum.
- 5.15 However, ComReg maintains its position as expressed in the revised paragraph 5.15 that no legal obligations on its part to grant any licenses will arise unless and until the granting by it and commencement of a licence following the completion of the Award Process. This paragraph is intended to avoid ComReg fettering its statutory discretion to the extent permitted by law.
- 5.16 In relation to eircom Group's various comments on paragraph 5.7, ComReg would respond as follows:
- eircom Group's arguments ignore the fact that the rights and obligations referred to in paragraph 5.7 are confined to those which might be claimed to arise pursuant to legitimate expectation, estoppel or other related legal arguments, rather than to those clearly provided for in the Information Memorandum. We have removed the parenthesis from paragraph 3.7 to clarify this matter. This is relevant when considering the scope and reasonableness of the disclaimers;
 - paragraph 5.7 is clearly intended to avoid, to the extent permitted by law, ComReg fettering its statutory discretion. In that light, paragraph 5.7(iv) did not contradict what was paragraph 3.3.3 (but which was removed in the final decision) of the draft decision in Document 11/60. While a bidder could maximise its chances of winning spectrum by bidding in a particular manner, clearly there are multiple reasons, other than the actual price level bid, why a bidder should not be guaranteed success, e.g. due to a breach of the Auction Rules or non-payment of fees. Of course, that is not to say that, where a bidder bids successfully in accordance with the Auction Rules and the granting of a licence accords with ComReg's statutory objectives, functions and duties, the bidder would not be granted a licence. In light of the above, it would not be appropriate for ComReg to guarantee success for a bidder pursuing any particular strategy;
 - in relation to paragraph 5.7(v), the same principles as set out in the preceding two bullets apply. In particular, Interested Parties should not seek to claim that rights and obligations arise under the content of this Information Memorandum pursuant to legitimate expectation, estoppel or other related

legal arguments. Interested Parties should have regard to the draft Regulations and schedule to same which clearly describe the rights and obligations relating to the future transfer and leasing of spectrum rights of use and the use of particular technologies. In ComReg's view, there is sufficient clarity provided in the draft Regulations for Interested Parties to form a view on those issues and in turn on the value of spectrum; and

- paragraph 5.7(ii) had a transitory function and is no longer relevant now that the final Information Memorandum has been published. As such, this paragraph has been removed.

- 5.17 In light of the above discussion, ComReg does not propose to amend the wording of paragraph 5.7 other than to delete the parenthesis and paragraph 5.7(ii) and to slightly amend paragraph 5.7(iv).
- 5.18 In relation to eircom Group's comments on amendments to the Information Memorandum once published, ComReg agrees that any material amendments made at that stage should be necessary and exceptional. ComReg also agrees that, in accordance with the requirements of transparency, any amendments should, in principle, be disclosed to all Interested Parties. However, the requirement of disclosure must still be assessed on a case by case basis and must be proportionate and non-discriminatory. Paragraph 5.30 seeks to reserve ComReg's discretion in this regard and ComReg notes that it applies to the period up until conclusion of the Award Process. There may, therefore, be circumstances where disclosure to all Interested Parties would not be appropriate (e.g. where an Interested Party is not a Qualified Bidder). Should circumstances dictate that disclosure to all Interested Parties would not be appropriate, then such disclosure should, of course, not take place. Notwithstanding this, ComReg intends to, as a general rule, inform all Interested Parties of any amendments or modifications to the Information Memorandum and Award Process. ComReg does not therefore consider it necessary to amend paragraph 5.30.
- 5.19 eircom Group also suggests that any amendments or changes must be subject to appropriate consultation as necessary. ComReg does not envisage that any amendments necessary following publication of the final Information Memorandum would be of a significance that would require a further consultation on the matter. However, were a proposed amendment to trigger the consultation requirements under Regulation 12 of the Framework Regulations, ComReg would of course carry out a consultation on same in accordance with its consultation procedures.

- 5.20 In response to eircom Group's comment on oral statements (paragraph 5.5 of the Information Memorandum), as noted above ComReg has deleted paragraph 5.5 on the basis that any amendments to the Information Memorandum shall be in writing.
- 5.21 ComReg notes eircom Group's comment on paragraph 5.25 and its suggestion that notification requirements for errors, omissions or a lack of clarity should be extended to ComReg. ComReg notes that eircom Group has not provided any reasoning to support this suggestion. In response, ComReg would first note that the question of clarity involves a subjective assessment which is particular to each Interested Party. Other than through the receipt of requests for clarification, it is not possible for ComReg to guess what matters might not be clear to a particular Interested Party. eircom Group's suggestion is therefore of little practical value in this regard.
- 5.22 However, in relation to errors or omissions, ComReg already ensures the utmost transparency in the Award Process and, where ComReg identifies errors or omissions which require amendment to the Information Memorandum or Award Process, it will inform Interested Parties in accordance with the provisions of the Information Memorandum as highlighted above. As such, ComReg does not consider it necessary or appropriate to amend paragraph 5.25.
- 5.23 In relation to eircom Group's comment on paragraph 5.16, ComReg now considers it inappropriate to impose a registration process before an Interested Party may download the final Information Memorandum and be considered for participation in the Award Process. ComReg does not want to unnecessarily restrict access to this document.
- 5.24 In relation to Telefónica's comments on the structure of the Information Memorandum, ComReg notes that it is not clear which parts of the Information Memorandum Telefónica is referring to and has assumed that Telefónica is referring, at least in part, to the provisions in Chapter 5. In any case, ComReg is satisfied that it has addressed Telefónica's concerns in responding to eircom Group's comments above and, in particular, those on paragraphs 5.4 and 5.6. In summary, ComReg is satisfied that the provisions in Chapter 5 are objectively justified, transparent, non-discriminatory and go no further than is necessary to achieve ComReg's objectives under the regulatory framework.
- 5.25 ComReg also notes that Telefónica's comment was made prior to the publication of Document 12/25 and that in that document ComReg has clarified a number of the issues raised by Telefónica in its response to Document 11/75. As such and in light of the response to eircom Group's comments above, ComReg does not

accept the assertion that its approach in the Information Memorandum “*serves to undermine bidders’ ability to be precise about exactly what is being sold in the auction*”.

Chapter 6

6 Other Issues Raised

6.1 This Chapter considers a number of other issues raised by respondents, namely:

- General issues relating to benchmarking methodology and minimum prices;
- Interest accrual on funds paid to ComReg during the auction;
- Deposit requirements;
- Interim GSM rights of use in the 1800 MHz band;
- Separation of liberalisation from long-term assignment;
- Exceptional circumstances;
- Separation of liberalisation from long term assignment;
- Unsold lots at the end of the award process; and
- Protection of Confidential Information.

6.1 Issues Relating to Benchmarking Methodology and Minimum Prices

6.1.1 ComReg's Position in Document 11/75

6.2 In Section 2.2.5 of Document 11/75⁸¹, ComReg noted its proposal for the implementation of an Upfront Fee (Reserve Price and any Additional Price) and Spectrum Usage Fees (SUF) for Liberalised Use Licences in the 800 MHz, 900 MHz and 1800 MHz bands for Time Slice 1 and Time Slice 2. The Reserve Price and SUFs proposed were based on the benchmarking exercise conducted by DotEcon and, in particular, its fourth Benchmarking Report.⁸² In its benchmarking reports DotEcon has derived lower bound range of estimates of the market value of liberalised spectrum rights of use in the sub-1GHz bands based on a number of international benchmarks. DotEcon has also carried out a relativity analysis to determine a lower bound range of estimates of the value of liberalised spectrum rights of use in the 1800 MHz band by reference to the value of sub-1 GHz

⁸¹ At paragraph 2.59.

⁸² Published as ComReg Document 11/59.

spectrum. ComReg proposed a point within each of the ranges estimated by DotEcon for the minimum price for sub-1GHz and 1800 MHz spectrum.

- 6.3 The draft Statutory Instrument (contained in Document 11/75) that “*The reserve prices will be revised pursuant to an updated benchmarking exercise prior to publication of this Statutory Instrument.*”⁸³

6.1.2 Views of Respondents on Document 11/75

- 6.4 Telefónica considers the minimum price to be excessive⁸⁴, which it had noted in its previous responses to consultations. Telefónica asserted that
[CONFIDENTIAL]

- 6.5 eircom Group states that the benchmarking exercises to date have “*base lined the time value of money to February 2013*” and proposed that the final reserve prices must also be adjusted for the time value of money to the date of publication.

- 6.6 Vodafone submits that:

- there should be a differential between the minimum price for 800 and 900 MHz spectrum given recent auction results in Spain;
- the proposed 1800MHz minimum price (at 50% of the proposed 800MHz and 900 MHz minimum prices) is based on a flawed valuation methodology and must be revisited; and
- the methodology used to determine reserve price for lots in both time slices for 800 MHz, 900Mz and 1800MHz spectrum rights is flawed.

- 6.7 H3GI submits that:

- the minimum reserve price is too high and it will have a negative impact on demand and the efficient use of spectrum;
- the market should be allowed to determine the true, long-run economic value of spectrum access; and
- ComReg should implement a minimum reserve price in line with minimum reserve prices in other countries.

⁸³ Footnote 74, page 170 of Document 11/75

⁸⁴ See Section 4.14 of Telefónica response to Document 11/75, as published in Document 12/21

6.8 In a letter to ComReg dated 7 December 2011 (see Document 12/21), H3GI requests clarification on how the reserve price and SUFs for sub-1 GHz spectrum lots in Time Slice 1 for were calculated.

6.1.3 ComReg's Position in Document 12/25 and 12/25A

6.9 Chapter 4 of 12/25 considers issues relating to benchmarking methodology and Minimum Prices. A number of points raised by respondents in relation to Document 11/75 (and subsequent related submissions) were addressed by ComReg in Documents 12/25 and 12/25A.

6.10 In relation to Telefónica's submission summarised above, ComReg considers that it fully addressed this issue in paragraph A10.19 and Section 10.4 of Document 12/25A.

6.11 In relation to Vodafone's view summarised above that the 800 MHz and 900 MHz bands should have differing prices given recent auctions (e.g. Spain), ComReg considers that it addressed this issue in paragraphs A10.67 and A10.68 of Document 12/25A.

6.12 In relation to H3GI's submissions summarised above, ComReg considers that these were addressed in paragraph A10.19 and Section 10.4 of Document 12/25A. In addition, ComReg notes that it provided clarification on how the reserve price and SUFs for sub-1 GHz spectrum lots in Time Slice 1 was calculated in Section 4.8.5 and Annex 10 of Document 12/25A.

6.13 As noted in Annex 10 of Document 12/25A, DotEcon, in its fifth Benchmarking Report⁸⁵:

- considered issues raised by respondents in relation to minimum prices and its benchmarking methodology;
- updated its conservative lower bound estimates of the market value of liberalised spectrum in light of:
 - recent auction results;
 - general updating and maintenance of its benchmark database; and
 - updated economic indices.

⁸⁵ Published as Document 12/23 alongside Document 12/25.

- 6.14 In light of DotEcon's updated conservative lower bound estimates of the market value of liberalised spectrum, ComReg proposed a minimum price of €20 million per 5 MHz band of paired sub-1 GHz spectrum, and €10 million per 5 MHz band of paired 1800 MHz spectrum for a 15-year licence.
- 6.15 The issue of the minimum price for new licences is discussed in detail in Annex 10 of Document 12/25A where ComReg addresses points raised by respondents.⁸⁶
- 6.16 At paragraph 3.3.16 of Decision D04/12, published as Chapter 8 of Document 12/25, ComReg decided to utilise "*minimum prices determined in accordance with the methodology set out in the Benchmarking Report prepared by DotEcon and reserve prices and spectrum-usage fees (SUFs) for Liberalised Use licences described herein, to be determined in accordance with the methodology set out in Chapter 4.8 hereof, and with the Issues Report prepared by DotEcon and which accompanies ComReg Document 12/25, where the final prices will be set out in the Information Memorandum, taking account of any additional relevant data available at that time.*"

6.1.4 Submissions Received Since Document 12/25

- 6.17 In its letter of 11 April to ComReg⁸⁷, Vodafone states that it remains of the view that the benchmarking approach to the setting of minimum prices is inappropriate and licence prices will be at a level such that there is a significant risk of choking off demand leaving spectrum inefficiently allocated.
- 6.18 Vodafone refers to a number of specific aspects of DotEcon's fifth Benchmarking Report which, in its view, warrant ComReg using a low but non-trivial minimum price rather than the benchmarking approach. Vodafone's points relate only to the regression analysis element of the Benchmarking Report and are summarised as follows:
- Vodafone refers to a comment made by DotEcon that the regression equations have not provided a particularly stable forecast of spectrum value and are highly sensitive to the inclusion of the most recent spectrum auction results in the dataset. Vodafone refers to the "*insufficient robustness of the outputs of the model given the relatively limited number of observations*

⁸⁶ See, in particular, paragraphs A10.6, A10.7, A10.37, A10.39, A.10.45, A10.50, A10.101, A10.112, A10.117 and also in Document 12/25, paragraph 3.80 and Section 4.8, and paragraph 4.176 regarding the 1800 MHz band.

⁸⁷ Letter from Vodafone dated 11 April 2012, as published in Document 12/49

available” and that they have “strongly influenced the setting of the current minimum price levels”;

- Vodafone raises a concern that the coefficient of one of the explanatory variables, GDP per capita, has changed from positive to negative, which it states is “*a highly perverse outcome that is contrary to all logic and theory.*” Vodafone notes that a compelling theoretical explanation as to why this has occurred has not been provided; and
- Vodafone expresses the view that DotEcon’s assessment of the use of GNP per capita rather than GDP per capita as an input in the regression analysis is not credible. According to Vodafone, DotEcon has not recognised the differential between GDP and GNP in Ireland as a result of transfer pricing. Vodafone submits that the large differential is irrelevant to the level of demand by these businesses for domestic goods and services.

6.19 On the basis of these three points, Vodafone asserts that it is imperative for ComReg to “*revise its entire approach to the setting of the minimum licence price and move instead to set a low but non-trivial price for spectrum lots in the auction.*”

6.20 In addition, by way letter to ComReg dated 5 April 2012⁸⁸, H3GI states that ComReg has failed to properly and transparently identify a minimum reserve price in accordance with its statutory objectives (page 20 of its letter).

6.1.5 DotEcon’s View

6.21 In its Issues Report (Document 12/51), DotEcon notes that it does not consider it necessary to provide a further update to its most recent benchmarking report as there is little in the form of new data to add from completed relevant mobile spectrum auctions. Since the Fifth Benchmarking Report, DotEcon notes that only the Hungarian 900MHz auction has been completed. DotEcon notes that the average price in the Hungarian 900MHz auction in January 2012 was approximately €0.80 per MHz per head of population, or equivalently €36.6 million for a 2 × 5 MHz licence adjusted to Irish population, which far exceeds the upper end of its recommended range for Ireland. Accordingly Dotecon considers that its conservative estimate of sub-1GHz value of €15- €26 million remains valid in light of these auction results.

6.22 In Document 12/51; DotEcon also take into account the current market conditions in Ireland, by considering up-to-date information about GDP and population so as

⁸⁸ Letter from H3GI dated 5 April 2012, as published in Document 12/49

to update the GDP per capita explanatory variable in the regression models. As the magnitude of this explanatory variable is small in all of the regression models used, it does not result in any significant changes to DotEcon's benchmarks.

6.23 Overall, Dotecon is of the view that their conservative estimate of sub-1 GHz value of €15- €26 million remains valid in light of recent auction results and updated economic and demographic data in Ireland.

6.1.6 ComReg's Final Position

6.24 Section 4.8 of Document 12/25 considered respondents' views on the proposed Spectrum Fees and sets out ComReg's final position on this issue including:

- its decision to rely on a benchmarking exercise and relativity analysis in order to calculate a conservative lower bound estimate of the value of spectrum for the purposes of setting the minimum price; and
- that the Minimum Price is not set at a level that would lead to an inefficient allocation of spectrum. This view is supported by the analysis set out in DotEcon's Fifth Benchmarking Report.

6.25 [CONFIDENTIAL]

6.26 In its letter dated 11 April 2012, Vodafone raises a number of points as to why, in its view, ComReg should use a low but non-trivial price for spectrum lots in the auction. Vodafone's view is based on what it claims to be problems relating to the regression analysis conducted by DotEcon which forms part of the benchmarking approach.

6.27 In relation to Vodafone's assertion that the change in sign of the co-efficient on the GDP per capita variable "*is a highly perverse outcome that is contrary to all logic and theory*", ComReg stated in its reply⁸⁹ that:

- both it and DotEcon "*consider that it is inappropriate to isolate specific components of a complex regression model without considering how these components operate and interact with the various other components of the model.*"; and
- the fact that the sign of the coefficient is negative "*...should not be considered in isolation from its magnitude and the statistical significance. In this respect, we note that the coefficient on GDP per capita was small and*

⁸⁹ ComReg response to Vodafone letter sent on 19 April 2012, as published in Document 12/49

insignificant in both the European regression and the global mobile auction regression.”

- 6.28 ComReg notes that DotEcon, by using a range of samples and methods, is able to provide a more informed view of the most robust minimum price range for the auction. In so doing DotEcon has placed more weight on the largest and most stable sample of global mobile auctions, which has a positive GDP coefficient and predicted licence value that falls within the previously recommended minimum price range of €15 – €26 million for the sub 1 GHz bands.
- 6.29 In relation to Vodafone’s reference to the use of GNI versus GDP, ComReg notes DotEcon’s view, as set out in its Fifth Benchmarking Report, that estimates based on a GDP or a GNI figure both fall within the range proposed for the sub 1 GHz bands (€15m - €26 million). Accordingly, and having duly considered the impact of using GNI rather than GDP, ComReg does not believe there is a sufficient basis to warrant a change to the approach adopted.
- 6.30 In relation to Vodafone’s view that the minimum price creates a risk of choking off demand for spectrum, ComReg considers that it has satisfactorily addressed this issue in Document 12/25 (see, for example, paragraph 3.80).⁹⁰
- 6.31 In response to the point raised by eircom Group, ComReg notes that a time value of money adjustment has already been accounted for.⁹¹

6.1.7 Final Minimum Prices for Liberalised Use Licences in the 800 MHz, 900 MHz and 1800 MHz bands

- 6.32 ComReg notes that there has been very little auction activity since the publication of the Fifth Benchmarking Report which would provide additional data to include in the benchmarking analysis. The outcome of the Hungarian 900 MHz auction was far in excess of the upper end of the previously recommended range. As such, ComReg is of the view that the conservative lower bound estimate for sub-1GHz spectrum of €15 – €26 million remains valid.
- 6.33 On this basis, the application of the methodology decided upon in Document 12/25 and Decision 04/12 to determine minimum prices (including Upfront Fee,

⁹⁰ In ComReg’s response to Vodafone’s letter of 19 April 2012 (as published in Document 12/49), ComReg stated that this issue (amongst others) had been raised by Vodafone previously, that ComReg analysed and set out its position on this matter in Document 12/25, and that it “*does not consider it necessary or appropriate to enter into further correspondence or consultation on these matters.*”

⁹¹ A spreadsheet containing the breakdown of the minimum price between the upfront reserve and the annual SUFs is available in annex 6.

Reserve Price, Additional Price and SUFs) for Liberalised Use Licences in the 800 MHz, 900 MHz and 1800 MHz bands produces the following:⁹²

	800 MHz or 900 MHz	1800 MHz
Time Slice 1		
Reserve Price	€2.55 m	€1.27 m
SUF⁹³	€1.08 m	€0.54 m
Time Slice 2		
Reserve Price	€3.26 m	€4.13 m
SUF⁹⁴	€1.08 m	€0.54 m

Table 3. Spectrum Fees (per 2 x 5 MHz block)

6.34 ComReg will apply the above prices in the Award Process.

6.2 Application of Interest to Funds During Auction

6.2.1 ComReg's Position in Document 11/75

6.35 Document 11/75 made a number of references to the matter of interest that may accrue on funds held by ComReg during the award process. In relation to the return of Deposits, ComReg stated that "*No interest will be paid by ComReg on funds held by it for part or all of the Award Process.*"⁹⁵

6.36 Document 11/75 outlined ComReg's then position on refunds to Winning Bidders if it was unable to make any Lot or Lots available for use by the commencement date of Time Slice 1. ComReg noted that "*no interest shall be payable by ComReg on any Upfront Fee or SUF already paid by a Winning Bidder for any Lot in the 800 MHz, 900 MHz and/or 1800 MHz delayed.*"⁹⁶

6.37 Paragraph 2.73 of Document 11/75 outlined ComReg's view that interest should be payable by Licensees on overdue fees.

⁹² Note: in the event of a significant delay to the award process and receipt of new and material benchmarking data, ComReg reserves the right to reapply the methodology decided upon in Document 12/25 and Decision 04/12 in light of the new and material benchmarking data.

⁹³ SUFs will be updated by a CPI adjustment factor.

⁹⁴ SUFs will be updated by a CPI adjustment factor.

⁹⁵ Paragraph 3.26 of Document 11/75

⁹⁶ Paragraph 2.78 of Document 11/75

6.2.2 Views of Respondents

- 6.38 In the responses received on Document 11/75, the following points were made by respondents regarding the issue of paying interest on funds held by ComReg during and following the Award Process.
- 6.39 eircom Group objected to ComReg's proposal and submits instead that any interest accruing on Deposits should be to the benefit of the relevant Applicant on the basis that the funds remain assets of the Applicants until such time as the proposed Award Process is completed. eircom Group noted that ComReg should not deny Applicants the opportunity to earn a return from their assets during the Award Process.
- 6.40 H3GI stated that ComReg has not provided any plausible or proper justification as to why any refunds issued by ComReg (in the case of spectrum availability being delayed) would not include interest earned on the relevant amounts.
- 6.41 Telefónica stated that there is an inconsistency in ComReg's approach to refunds and its approach to upfront reserve prices and annual SUFs. In the case of refunds, it asserted that ComReg had proposed that there be no interest, inflation or time-based adjustment of the amount of a refund. In addition, in some cases ComReg proposed to apply credit against future licence fees rather than paying refunds directly. Telefónica took the view that this contrasts with the proposed imposition of all of the above adjustments on payments to be made by Licensees.

6.2.3 ComReg's Final Position

- 6.42 Having considered the views of respondents, ComReg intends to ensure that all interest accrued on Deposits during the Auction Process is returned to Bidders, including interest earned on any amounts which are subsequently returned to Bidders in the form of refunds granted as a result of delayed spectrum availability (subject to the provisions of section 2 of the Information Memorandum relating to the circumstances under which such refunds would be granted).
- 6.43 During the Award Process, each Bidder will be required to transfer relevant sums of money to a special ComReg bank account, established for the purpose of this Award Process only. This includes initial and possibly subsequent Deposits, amounts bid in excess of Reserve Prices in the Main Stage and amounts bid in the Assignment Stage.
- 6.44 ComReg will maintain separate accounts for each Bidder in order to facilitate the return of any interest accrued.

- 6.45 When the Award Process is completed, the total amount of any Winning Bid (less any rebate or refunds if appropriate) will be deducted from each Bidder's account by ComReg. Any remaining funds in the account plus all interest earned will then be transferred to an account as nominated by relevant Bidders.

6.3 Deposit Requirements

6.3.1 ComReg's Position in Document 11/75

- 6.46 ComReg set out the Deposit requirements in Section 3.3.2 of Document 11/75. ComReg stated that "*An Applicant must submit a Deposit with its Application. The required amount of the Deposit corresponds to the sum of the Reserve Prices of Lots requested by the Applicant in its Lot Application Form.*"

6.3.2 Views of Respondents

- 6.47 eircom Group expressed the view that the Deposits proposed by ComReg are high by international standards. Whilst acknowledging that ComReg requires some comfort that Applicants are serious participants, eircom Group is of the view that ComReg could obtain this comfort via other more flexible approaches (e.g. a letter of credit, a bank guarantee or funds on deposit in an escrow account).
- 6.48 Telefónica welcomed the Deposit proposal while seeking some clarity around trigger points for Deposit calls.

6.3.3 ComReg's Final Position

- 6.49 ComReg notes the view expressed by eircom Group. While eircom Group claims that the deposit is high by international standards, it is notable that it has not sought to substantiate this view with any supporting evidence. Further, ComReg notes that no other views were expressed by interested parties on this issue.
- 6.50 ComReg considers its Deposit levels on application to be a necessary and prudent step in discouraging frivolous bidders. This approach also lessens any earlier-than-necessary requirement for Deposit calls, something which ComReg notes that eircom Group has itself argued against on the basis of Auction disruption.⁹⁷
- 6.51 ComReg assumes that serious bidders will prefer to ensure that any potential for frivolous participation is minimised. In addition, ensuring that sufficient Deposits

⁹⁷ This matter is addressed in Chapter 4 of this document.

have been provided is, for all concerned, preferable to finding out subsequently that a Bidder does not have sufficient funds to pay its Winning Bid. Furthermore, and given that ComReg intends to ensure that all interest accrued on Deposits during the Award Process is returned to Bidders, ComReg sees no advantage in diverting from its current proposal.

6.52 The matter raised by Telefónica with regard to trigger level for Deposit calls is addressed in Chapter 4 of this document.

6.53 Accordingly, ComReg considers that no change is required to its proposal as set out at paragraph 3.24 of Document 11/75. Therefore, an Applicant must submit a Deposit with its Application and the required amount of the Deposit must correspond to the sum of the Reserve Prices of Lots requested by the Applicant in its Lot Application Form.

6.4 Interim GSM Rights of Use in the 1800 MHz Band

6.4.1 ComReg's Position in Document 11/75

6.4.2 Views of Respondents

6.54 In its submission on Document 11/75, Telefónica states that the problem created by the 6 month licence gap in the 1800 MHz band (i.e. between expiry of its GSM 1800 MHz licence and the date of commencement of Time Slice 2) remains a shortcoming in ComReg's proposal that must be addressed.⁹⁸

6.4.3 ComReg's Position in Document 12/25

6.55 ComReg addressed Telefónica's submission in section 4.6 of Document 12/25. In particular, as noted in paragraph 4.186 of same, ComReg has:

- committed to considering whether there is a requirement for 1800 MHz interim GSM licences in light of the prevailing situation after the Award Process but significantly before Licence expiry; and
- committed to granting such interim GSM 1800 MHz rights only where it is justified, reasonable and proportionate to do so, having regard to the salient facts at that time and to ComReg's statutory functions, objectives and duties.

⁹⁸ At paragraph 4.4 of its submission in response to Document 11/75.

6.4.4 Views of Respondents to Document 12/25

6.56 In its letter to ComReg of 13 April 2012, Telefónica states that in the event that a 6-and-a-half month spectrum gap arises, Telefónica will rely on ComReg to issue any necessary interim licence and will regard a failure to do so as a breach of ComReg's statutory objectives.

6.57 In its letter to ComReg of 11 April 2012, Vodafone states, amongst other things, that:

- whilst ComReg states in paragraph 4.187 of its response to consultation and Decision that it would not be appropriate or objectively justified for it to remedy a problem that has not yet arisen or may never arise, Vodafone considers that this mischaracterises what a firm advance commitment to grant Interim Licence would achieve. In particular, in Vodafone's view its purpose is not to remedy a problem that may never arise, but to make prudent provision should a 1800 MHz spectrum availability gap of 6 ½ months transpire that would pose risks both for service provision to customers, the efficient use of spectrum and efficient investment;
- it is necessary for ComReg to provide a commitment that interim 1800 MHz licences would be issued in advance of an award process so that all interested parties can make an informed decision with more complete information and maximum certainty;
- **[currently claimed to be confidential];**
- **[currently claimed to be confidential];**
- **[currently claimed to be confidential];**
- **[currently claimed to be confidential];** and
- ComReg can and must address this issue by providing a firm commitment, no later than the commencement of the Application Stage of the auction to granting interim 1800 MHz licences.

6.4.5 ComReg's Final Position

6.58 ComReg addressed Telefónica's and Vodafone's submissions in its replies to their respective letters.

6.59 In relation to Telefónica's submission, ComReg stated (amongst other things) that it: *"did not commit to issuing interim licences in the event of a gap in the availability of 1800 MHz spectrum arising. In section 4.6.3 of that document, ComReg merely noted that, in such an event, it would consider whether there was a requirement for interim GSM 1800 MHz licences in light of the prevailing situation after the award process, and that it would consult with interested parties on any proposal in this regard. Accordingly, the reliance referred to in your letter would seem to be misplaced."*⁹⁹

6.60 In relation to Vodafone's submissions, ComReg stated this issue had been analysed and ComReg's final position presented in Document 12/25, and that it *"does not consider it necessary or appropriate to enter into further correspondence or consultation on these matters"*.¹⁰⁰

6.5 Extension of Interim GSM Rights of Use in the 900 MHz Band

6.5.1 Views of Respondent

6.61 In its letter dated 8 May 2012, McCann Fitzgerald, on behalf of Vodafone, states, amongst other things that:

- it is concerned about the current timing of the auction process and the impact this may have on Vodafone's ability to guarantee services to its customers in light of the fact that its 900 MHz interim licence expires in January 2013;
- Vodafone's concerns regarding continuity of customer services is based on its conclusion that ComReg cannot anticipate that an auction could be held by September 2012;
- the fourteen week process between publication of the Final Information Memorandum and the start of the auction, as proposed by ComReg in Document 11/75, would be the bare minimum timeframe possible if there was widespread ratification by potential participants. However, given the absence of full ratification by participants, and that ComReg is proposing to introduce new elements relating to information management (without consultation), it believes that the fourteen week timeframe is unachievable and will require an extension as the auction will not occur before September 2012;

⁹⁹ ComReg response to Telefónica letter, sent 19 April 2012, as published in Document 12/49

¹⁰⁰ ComReg response to Vodafone letter, sent 19 April 2012, as published in Document 12/49

- Red-M/Vilicom's report, Document 12/22, states that an existing operator would require 5 months to complete relocation activities and given that 900 MHz interim licences expire on 31 January 2013, the auction would need to be completed by the end of August 2012. As it considers that the auction would not be complete before September 2012, it sees the post-auction processes extending beyond the expiry date for interim 900 MHz licences and therefore ComReg must address this situation urgently to ensure continuity of services; and
- ComReg previously consulted 8 months in advance of expiry of Telefónica's and Vodafone's original GSM 900 MHz licences, and ComReg must immediately commence a process leading to a reasonable extension of existing interim licences.

6.62 By letter dated 17 May 2012, McCann Fitzgerald reiterates Vodafone's view that ComReg should commence a process that will allow Vodafone to have certainty in the provision of services to its retail and wholesale customers, including, if necessary, the extension of the existing interim licences.

6.5.2 ComReg's Position

6.63 ComReg has considered these submissions and would respond as follows:

- ComReg recognises that the timing between the end of the auction and the beginning of Time Slice 1 (i.e. the day after existing interim 900 MHz licences expire) is limited with respect to allowing time for relocation activities to take place (the indicative timeframes for which have been described by Red-M/Vilicom in their most recent report);
- ComReg therefore recognises that it may become appropriate in light of its statutory objectives, functions and duties to consider the extension of existing Interim GSM 900 MHz rights of use to enable the completion of relocation activities in the 900 MHz to be conducted in an effective and efficient manner (and in the timeframes determined by the Relocation Project Plan);
- If it becomes clear after due consideration that such extensions are necessary, ComReg will conduct appropriate consultation with interested parties. However, at this time, ComReg cannot second guess or prejudice the outcome of the auction and must therefore wait until the outcome of the auction process is known before deciding on when interim licences are required at all;

- It is noted, however, that the appropriate duration of any extensions of interim rights of use, were such extensions considered necessary, would only become ascertainable following the outcome of the Auction (and, particularly, the settlement of the relocation project plan).;
- In that regard, whilst ComReg notes that the consultation process for existing interim GSM rights took several months¹⁰¹, it does not believe that a consultation process for any extension to same would require as much time given that many substantive issues are likely to have been settled by previous consultations and decisions.

6.64 ComReg responded to McCann Fitzgerald (regarding both of its letters; of 8 May 2012 and 17 May 2012) on 18 May 2012 regarding the material related to timing issues. ComReg stated that it *“is having regard to these and to Vodafone's suggestion of possible extensions to existing interim GSM 900 MHz licences, as well to issues relating to timing generally, and ComReg will address same in its forthcoming Response to Consultation 11/75”*.

6.65 Taking the above into account, ComReg will address any potential extension of interim GSM 900 MHz licences at a time when ComReg considers it necessary to do so, and in any event sufficiently in advance of expiration of existing interim 900 MHz licences.

6.6 Exceptional Circumstances

6.6.1 ComReg's Position in Document 11/75

6.66 In a number of places in the draft Information Memorandum, including paragraphs 3.21, 3.73 and 4.21, ComReg reserves a level of discretion to deal with exceptional circumstances that may arise.

6.67 At paragraph 3.11 of the draft Information Memorandum, ComReg noted that references to ComReg exercising its discretion should mean ComReg exercising its discretion in accordance with its statutory functions, objectives and duties.

¹⁰¹ Whilst ComReg initially discussed the possibility of Interim GSM 900 MHz rights of use in Document 10/71, the actual consultation on same was set out in Document 11/11 (published in February 2011) or approximately 3 months in advance of expiration of Vodafone's and Telefonica's then existing GSM 900 MHz licences. In this light, it is important to note that, as acknowledged in the letter from McCann Fitzgerald of 17 May, we are still a full eight months away from Vodafone's interim licence expiry.

6.6.2 Views of Respondents

- 6.68 H3GI states that ComReg should, in the interests of clarity and fairness, provide further guidance on the exercise of its discretion in the various circumstances noted.¹⁰²
- 6.69 H3GI also asserts that if ComReg were to make a decision without providing reasons for same that would constitute, *inter alia*, an inappropriate and unfair abrogation of H3GI's rights of appeal under Regulation 4 of the Framework Regulations.¹⁰³
- 6.70 Telefónica questions whether ComReg could legitimately exercise its discretion to exclude a Bidder from the Auction and not re-run some or all of the primary rounds of the Auction.¹⁰⁴

6.6.3 DotEcon's assessment

- 6.71 DotEcon considers ComReg's reservation of discretion in relation to certain matters at section 7 of Document 12/51. In that section, DotEcon sets out some analysis in relation to specific exceptional circumstances that might arise, primarily in relation to the exclusion of one or more Bidders from the auction.
- 6.72 DotEcon notes that the basis for intervention by ComReg and whether or not Bids are excluded from the Auction (and possible re-running of some previous rounds) is likely to depend on the reason for exclusion and the extent to which the exclusion, given the current state of the Auction, will affect the remaining Bidders. As it is not appropriate to provide an exhaustive list of when ComReg might have cause to use its exceptional powers in the case of a Bidder being excluded, DotEcon recommends that ComReg should retain full discretion in this regard.
- 6.73 Notwithstanding this discretion, DotEcon notes:
- It is important to distinguish between excluding some or all of a bidder's bids from the determination of winning bids and base prices, and revising the current state of a primary bid round to retrospectively reflect the exclusion of a bidder;
 - in the case where a bidder is excluded during the open rounds of the Auction, DotEcon does not consider that leaving the current round prices unaltered would corrupt round by round price discovery as suggested by Telefónica.

¹⁰² At page 18 of its submission in response to Document 11/75.

¹⁰³ At page 18 of its submission in response to Document 11/75.

¹⁰⁴ At page 19 of its submission in response to 11/75.

Bidders will have been making all bidding decisions based on prevailing round prices at that time;

- in the case where a bidder is excluded during the open rounds of the auction, the auction may go from a state of excess demand for Lots to one of excess supply for at least one category of lot, implying unsold lots. In this case, if ComReg were not to re-run any particular rounds in the Auction, there are factors that mitigate against bidders still in the auction being penalised on account of the excluded bidder's behaviour; and
- in relation to the issues raised by H3GI, DotEcon notes that it is not possible to provide an exhaustive list of possible events in the Auction that would result in ComReg using its exceptional powers.

6.6.4 ComReg's Final Position

6.74 While ComReg has reserved discretion in relation to a number of significant matters, it does not envisage utilising such discretion save in exceptional circumstances. ComReg is also of the view that it is not appropriate to fetter its statutory discretion; rather it is obliged to exercise such discretion, having regard to all of the relevant circumstances in accordance with its statutory functions, objectives and duties.

6.75 For the avoidance of doubt, if specific exceptional circumstances arise, in respect of which ComReg has received advice from its expert advisers, such as that set out by DotEcon in section 7 of Document 12/51, ComReg would have regard to, but would not be bound by such advice in exercising its discretion.

6.7 Separation of Liberalisation from Long Term Assignment

6.7.1 Views of Respondents

6.76 Telefónica recommends that ComReg separates the issues of liberalisation from that of long term spectrum assignment as a means of dealing with the complexity of the proposed auction, allowing substitutable spectrum to be awarded together (1.8 GHz and 2.6 GHz) and to eliminate errors.

6.7.2 ComReg's position in Document 12/25

6.77 ComReg notes that Telefónica does not elaborate on why it considers separating these two issues would deal with any of the perceived problems it identifies. In any case, ComReg is satisfied that it has already sufficiently considered each of

the three perceived problems in Document 12/25 and ComReg's final position is set out therein.

6.8 Unsold Lots at the End of the Award Process

6.8.1 ComReg's Position in Document 11/60

6.78 ComReg's then position in Document 11/60 (notably paragraphs 4.42 and 4.45) was that any spectrum lots which were unsold in the Award Process would not be assigned by ComReg for a period of at least 2 years following the Award Process.

6.8.2 Views of Respondents on Document 11/60

6.79 Two respondents addressed this issue in response to Document 11/60:

- Vodafone agreed that ComReg's proposal not to assign unsold spectrum for at least 2 years would provide a disincentive for a 'wait and see' approach from bidders hoping that any unsold spectrum would be offered on more favourable terms in the future; whereas
- H3GI submitted that ComReg should not leave spectrum unallocated, given its scarcity and importance.

6.8.3 ComReg's Position in Document 12/25

6.80 Section 4.2.3 of Document 12/25 and Section A5.7.4 of Document 12/25A set out ComReg's position regarding unsold lots. ComReg noted;

- DotEcon's view that spectrum lots would remain unsold in the Auction if there is insufficient overall demand or if lots remain as they do not fit in the optimal winning combination. ComReg agreed with DotEcon that in these circumstances the Auction had determined that there is no efficient way of releasing this spectrum and hence there would be little harm in delaying release of this spectrum for not too long a period;
- that delaying release of spectrum for not too long a period reduces incentives for strategic behaviour of bidders where they do not express full demand for spectrum in the auction in the hope that it could acquire spectrum on more favourable terms shortly after the auction; and
- with respect to Vodafone's submission stating that future release of unsold spectrum should not be on more favourable terms than those in the

upcoming auction, ComReg agreed with DotEcon that circumstances can change, and ComReg should retain flexibility to take account of prevailing circumstances between spectrum releases.

6.81 Having considered respondents' and DotEcon's views, ComReg decided that it was not necessary to set an upper bound on how long it would wait before holding an auction for unsold spectrum, and the lower bound was set at a least a year.

6.8.4 Views of Respondents Received since Document 12/25

6.82 Two respondents commented on ComReg's position as set out in Document 12/25 as follows.

6.83 In its letter of 5 April¹⁰⁵, H3GI:

- notes that ComReg and DotEcon do not believe that it is a likely outcome that one bidder acquires only 2 × 5 MHz of sub-1 GHz spectrum;
- claims that DotEcon's basis for this is that "*if there is no value in such a block, a bidder should not bid for it or bid an appropriately low figure (and at a minimum, the minimum reserve price)*";
- claims that ComReg bases its view on DotEcon's analysis; and
- states that "*the logical conclusion is that spectrum will be unallocated or a bidder will be allocated one block of spectrum. The former is not an efficient outcome*".

6.84 In its letter of 11 April 2012¹⁰⁶, Vodafone, amongst other things:

- notes the significant change in position by ComReg in paragraph 3.4 of its Decision to shorten the period within which it will not seek to re-auction any spectrum lots that are not unallocated as a result of the upcoming multi-band spectrum award process from at least 2 years to at least 1 year;
- notes that ComReg has also raised the issue of possibly auctioning any unallocated 1800 MHz spectrum lots from the imminent spectrum award process in a subsequent award process for 2.6 GHz spectrum (paragraph 3.40 of the response to consultation and final decision);

¹⁰⁵ H3GI letter sent to ComReg, dated 5 April 2012, as published in Document 12/49

¹⁰⁶ Vodafone letter sent to ComReg, letter dated 11 April 2012, as published in Document 12/49

- expresses its concern that this change in position may reflect an implicit recognition by ComReg that the current levels of the proposed minimum prices for spectrum lots, and 1800 MHz lots in particular, are such that they pose a major risk of choking off demand for spectrum and leading to spectrum going inefficiently unallocated as an outcome of the auction process;
- expresses its alarm by an apparent related attempt by ComReg and DotEcon to re-define what could be regarded as a successful auction outcome from the perspective of overall societal welfare. In that regard, it:
 - notes DotEcon’s assessment in paragraphs 117 and 118 of ComReg Document 12/24, with which ComReg agrees that if spectrum goes unsold in the auction then the award process has determined that there is no efficient way of allocating it; and
 - considers that this is “profoundly misguided reasoning”, as demand for spectrum cannot be treated in isolation from the price at which it is made available, and the minimum licence price has been set by ComReg at a high level in absolute terms on the highly questionable grounds that this is necessary to minimise the incentives for tacit collusion;
- states categorically that there is no objective basis for any interpretation other than that a failure to allocate spectrum lots in the upcoming spectrum award process would be an unsuccessful outcome, with adverse impacts on the efficient use of spectrum and the quality of services delivered to businesses and consumers; and
- submits that ComReg should take all reasonable steps to minimise this risk, the most practical step being a significant reduction in the minimum licence price from current proposed levels.

6.8.5 DotEcon’s Analysis

6.85 DotEcon sets out its analysis on these issues in Annex A of Document 12/51 and, in particular:

- does not consider that ComReg’s final position on unsold lots in Document 12/25 gives any indication or implicit recognition that the proposed minimum prices pose a risk of choking off demand. In that regard, DotEcon:

- considers that it is necessary for ComReg to specify its plan regarding unsold spectrum for completeness and to provide a degree of certainty following the award process; and
 - refers to its analysis in Document 12/24, which stated that a minimum period of time is required before a follow-up sale of unsold spectrum in order to provide a disincentive to strategically reduce demand in the award process.¹⁰⁷
- disagrees with Vodafone’s assertion that an auction outcome where spectrum goes unallocated would present a failure of the auction. In this regard, DotEcon note:
 - that unallocated spectrum could be a result of insufficient overall demand, or that there could be lots which did not fit into the optimal winning combination; and
 - its view in Document 12/24 that the outcome would be efficient given the demand for spectrum expressed by bidders in the auction, and that there is little benefit in immediately re-auctioning spectrum, as there is little reason to suggest that bidders’ valuations would have changed. In this regard, DotEcon believe there would not be an efficient way of allocating spectrum immediately following the Award Process.

6.8.6 ComReg’s Final Position

6.86 In relation to H3GI’s concerns, ComReg does not believe that H3GI has raised new material which has not already been addressed in Section 4.2 of Document 12/25 and Section A5.7 of Document 12/25A. Accordingly, ComReg stated in its response to H3GI’s letter¹⁰⁸ that H3GI had misconstrued certain text from DotEcon, which led H3GI to infer that spectrum could as a result go unallocated.

6.87 In relation to Vodafone’s submissions, ComReg would respond as follows:

- firstly, ComReg notes Vodafone’s submission in relation to Document 11/60 that ComReg’s proposal for a non-release period for unsold lots of at least 2 years would provide a disincentive for a ‘wait and see’ approach from bidder hoping that any unsold spectrum would be offered on more favourable terms;

¹⁰⁷ DotEcon also recognised that the prevailing time between initial award process and any follow-up sale would allow ComReg to take account of prevailing circumstances, and that the speed in which ComReg can sell unsold spectrum is hampered by the time it would take to consult on the matter.

¹⁰⁸ ComReg response to H3GI letter, sent 11 April 2012, as published in Document 12/49

- given this stated position, it is somewhat curious that Vodafone has chosen to ignore its previous submission and raise its concerns regarding ComReg's shift to a minimum non-release period of at least 1 year in the context of minimum prices and, moreover, seek to claim that ComReg's shift represents an implicit acknowledgement by ComReg that prices are too high. For the avoidance of doubt, ComReg rejects this assertion and would, instead, refer to the considerable amount of analysis carried out by DotEcon on minimum prices, including extensive consideration of views of interested parties, and ComReg's assessment of, and conclusions in relation to, same in Document 12/25 and in this chapter;
- furthermore, ComReg's reference to a potential joint award of any unsold 1800 MHz lots and 2.6 GHz spectrum rights that may become available in the future at paragraph 3.40 of Document 12/25 reflected its view that a tri-band auction of 800 MHz, 900 MHz and 1800 MHz spectrum rights did not necessarily preclude the efficiency gains that may be associated with a separate joint award of complementary 1800 MHz and 2.6 GHz spectrum rights (to which Telefonica refers in its previous submission). Given the context in which the point is made by ComReg, ComReg rejects the validity of the inference sought to be drawn by Vodafone in this regard; and
- in relation to Vodafone's view that a failure to allocate spectrum lots in the upcoming spectrum award process would be an unsuccessful outcome, whilst ComReg would not disagree with the notion that demand for spectrum cannot be treated in isolation from the price at which it is made available, ComReg would respectfully disagree with the conclusion being drawn by Vodafone and notes that there would be legitimate and plausible reasons for unsold lots, other than the level of minimum price, including that these lots do not fit within the optimal winning bid combination.

6.88 Accordingly, ComReg does not consider that material has been put before it requiring it to deviate from its position on unsold spectrum lots as set out in Document 12/25 and Decision 04/12.

6.9 Protection of Confidential Information

6.9.1 Correspondence

6.89 In April 2012, ComReg inadvertently sent a non-confidential letter to Vodafone which was intended for Telefónica, and correspondingly sent a non-confidential

letter to Telefónica which was intended for Vodafone. ComReg acted accordingly and contacted both parties once this error was discovered, and in any event, there was no confidential material contained in either of these letters. ComReg received both letters back from Vodafone and Telefónica and then forwarded these letters to the intended recipients.

- 6.90 Telefónica submitted an email to ComReg on 24 April regarding this misdirection of correspondence. In this email, Telefónica stated that *“given the sensitivity of the spectrum project we are concerned that processes are not sufficiently robust to ensure that commercially sensitive data could be disclosed in error by ComReg”*, and *“we are relying on ComReg to ensure data given to ComReg and communications to us by ComReg are managed by best practise regulatory processes and I am seeking a confirmation that such processes are in place, to the highest standard, for the upcoming spectrum auction...ComReg need to state clearly in the upcoming IM final document what measures are being taken to ensure the integrity of the spectrum auction process.”*
- 6.91 ComReg responded to Telefónica’s email of 23 April 2012 on the 24 April 2012. In its response, ComReg stated:
- *“Given the non confidential nature of Telefónica’s letter and ComReg’s response to same we do not consider it appropriate or accurate to refer to the current matter as a data breach”*;
 - *ComReg continues to keep its procedures under review and makes changes it considers appropriate and this experience will, of course, be considered within that context”*; and
 - *In relation to the upcoming multi-band spectrum auction, there will be appropriate, enhanced information handling procedures in place, which ComReg will confirm in the response to consultation to ComReg Document 11/75 and final information memorandum”*.
- 6.92 Vodafone raised a number of concerns in a letter sent to ComReg, dated 23 April 2012. In this letter Vodafone stated that ComReg should, prior to the proposed auction, *“put in place a protocol for the custodianship of data that best reflects best industry and regulatory practice”*. Vodafone also stated that this was not the first time that such an incident regarding custodianship of data relevant to the spectrum auction has occurred, referencing other claimed lapses.
- 6.93 Vodafone stated that it was forced *“to conclude that poor standards of custodianship of third party data, including confidential data and business*

secrets, are endemic within ComReg. As a result, our confidence in ComReg's ability to maintain the confidentiality of data, including business secrets, is compromised, and that *“ComReg must put in place a new protocol for the custodianship of third party data, including confidential data and business secrets, which corresponds with best international practice known in our industry”*. Vodafone outlined some of its own processes for dealing with confidential information and business secrets, and set out the following commitments that it considers ComReg must make:

- procuring an independent audit regarding data and document security, and adopting any changes recommended from such an audit in a reasonable timeframe before the proposed auction;
- a commitment in the IM to retain and rely upon independent audit advice, that the advice is published, and that advisors have at least €500m professional indemnity insurance;
- public disclosure of information on all prior, current and any future data and document security breaches including those related to the spectrum auction process, thereby ensuring all potential auction participants are aware of prior breaches and have equal information in advance of and during the auction;
- a request for and publication of an opinion from the Competition Authority prior to IM publication regarding whether any data and document security breaches prejudice the integrity of the auction;
- a commitment that it will publish a timeframe for the conduct of the above and that it will publish a timetable showing any impact on the Award Process; and
- a commitment that it will reimburse on an indemnity basis, all costs incurred by participants in the proposed Auction in relation to (i) each and every data and documentation security breach the subject of the letter, and (ii) the commitments above. In addition, Vodafone sought a written confirmation from ComReg that such costs shall not be recovered from those participants in any way and in particular by way of the levy on licensed firms.

6.94 ComReg responded to Vodafone's letter on 26 April 2012. In this letter, ComReg stated its regret regarding the clerical error which resulted in the misdirection of correspondence. ComReg affirmed that it was taking the matter seriously, and that it takes the matter of confidentiality maintenance and information-disclosure seriously also. ComReg noted , amongst other things, that:

- only one of the three events referred to in Vodafone's letter related to the forthcoming auction;
- **[confidential]**; and
- it is not reasonable for Vodafone to infer from the matters mentioned in its letter that ComReg's processes and protocols regarding data custodianship are not robust, or are necessarily wanting;
- ComReg does not agree that its current arrangements are, or have been shown to be, inherently or necessarily deficient or unfit for purpose;
- ComReg intends to put in place appropriate, enhanced information handling procedures;
- it would be premature and inappropriate for ComReg to comment on Vodafone's recommendations or pre-determine the actions which ComReg might take in hypothetical situations;
- ComReg does not envisage the Auction process being held up by the consideration of these matters and does not intend to refrain from taking further steps in its process leading to the forthcoming Auction; and
- ComReg does not envisage giving a commitment mentioned by Vodafone in relation to reimbursing costs incurred by participants in the Proposed Auction in relation to each and every data and documentation security breach, and does not understand the basis on which Vodafone considers it might be entitled to recover the costs it says it has incurred in addressing the information disclosure matters referred to in its letter.

6.95 Vodafone responded to ComReg's letter on 30 April 2012. In this letter, Vodafone stated that it remained concerned regarding "*lapses*" it outlined in its letter of 23 April 2012, and that "*poor standards of custodianship of data, including confidential data and business secret, are endemic within ComReg*". In this letter, Vodafone also stated, amongst other things, that;

- it is not relevant that the most recent event was misdirection of non-confidential material and should not be relied upon to extenuate the lapse or to defend ComReg/s current arraignments, and that "*it reveals...a lack of attention to proper processes in circumstances where lapses have already occurred and in the context of a process that will involve operators being invited to commit to significant investment*";

- Vodafone again urged ComReg to consult on procedures before proceeding with the IM; and
- *“Without appropriate safeguards for confidential data, there can be no guarantee of the fairness and transparency of the process; for that reason, potential participants are entitled to the opportunity to make their views known on the adequacy of the procedures ComReg intends to introduce”.*

6.96 ComReg responded to Vodafone’s letter of 30 April 2012 on 4 May 2012. In this letter, ComReg stated, as in its letter of 26 April 2012; that it *“does not wish to engage in adversarial debate about the minutiae”*. ComReg noted that it had regard to Vodafone’s suggestions relating to data security and custodianship arrangements and that ComReg *“takes confidentiality-maintenance and information-disclosure issues seriously”*. ComReg also stated that whilst it considers its procedures and protocols with respect to confidentiality-maintenance and information-disclosure to be generally robust, *“it intends in any event to put in place special procedures and protocols for information-management in the post-Information Memorandum phase of this process, including, of course, the auction process itself. The development of these arrangements is, as you [Vodafone] recognize, a matter for ComReg”*. ComReg stated that it was working on these arrangements and taking appropriate advice, and would confirm its approach in its Responses to Consultation on Document 11/75 and/or in the final IM, and that ComReg did not envisage the need for a separate consultation on the issue.

6.97 McCann Fitzgerald, acting on behalf of its client Vodafone, submitted a letter to ComReg on 8 May 2012 relating to the issue and the previous correspondence between ComReg and Vodafone on same. McCann Fitzgerald raised numerous concerns on behalf its client, namely;

- Vodafone’s *“grave concern about the confusion and uncertainty that now surrounds ComReg’s proposed auction process due, in part, to information custodianship issues”*;
- the claimed unresolved issues with ComReg’s proposed auction process, being:
 - *“endemic failures in ComReg’s standards of custodianship of information including firms’ business secrets”*;
 - ComReg’s unwillingness to consult on the matter and the asserted impact on the integrity of the auction;

- risk of delay, confusion and challenge;
 - “*enormous and avoidable jeopardy*” faced by Vodafone and Telefónica whose interim licences expire in January 2013.
- ComReg’s insufficient support for its positions in its letter of 4 May 2012.
- 6.98 On 8 May 2012, a ComReg employee inadvertently sent a personal email to an employee of Vodafone, with the email intended for a different person with the same name.
- 6.99 McCann Fitzgerald, acting on behalf of its client Vodafone, submitted a letter to ComReg on 16 May 2012. This letter, amongst other things, expresses concerns with regards to “*another lapse by ComReg which it believes is relevant to the conduct of the Proposed Auction*”. McCann Fitzgerald details the specifics of the email from a ComReg employee, and claims that the email from George Merrigan on 10 May 2012 “*seeks to diminish the significance of this episode*”. McCann Fitzgerald reiterate concerns from previous letters that “*the lapses...provide evidence of endemic failure in ComReg’s system for the securing and protecting of information*”. McCann Fitzgerald also refers to an article from the Sunday Business Post (4 April 2011), where a report from Deloitte “*reportedly criticized ComReg ‘for insufficient security implementation’*” [sic]. The McCann Fitzgerald letter reiterates Vodafone’s request that ComReg reconsiders its decision not to consult on the matter.
- 6.100 ComReg responded to McCann Fitzgerald’s letters on 18 May 2012. In this letter, ComReg stated that;
- it “*rejects the suggestions that it is not taking information-security issues seriously, that it has been intransigent in its approach to the question of holding a separate consultation in relation to this matter, or that it is not being transparent, as suggested in your letter*”;
 - “*previous comments about not engaging in adversarial debate about the minutiae were misinterpreted by you insofar as your letter conflates them with the notion of ComReg considering information-security issues as being “small or trivial”*”;
 - its position remains as previously articulated, including that a consultation is not required, ComReg will have regard to views and proposals submitted generally and that ComReg is working on appropriate arrangements and

taking advice in relation to same, which will be published in the upcoming Response to Consultation on Document 11/75 and final IM;

- it “*is fully satisfied with the integrity of the planned auction process and the adequacy of the steps it is taking*”; and
- procedural arrangements it is working on do not constitute “*new elements*” which require formal consultation.

6.9.2 ComReg’s Final Position

6.101 With respect to information-management and security for the auction process, ComReg takes this matter very seriously. In this regard, ComReg’s most recent letter to McCann Fitzgerald sets out its current position on the matter.¹⁰⁹ ComReg has had due regard to all submissions on this matter, and to the relevant statutory provisions and its guidelines on consultations. ComReg’s procedures for information-management and security for the Award Process have been and will be enhanced in light of concerns raised.

6.102 In this regard, ComReg has identified four specific areas of confidentiality to be carefully managed throughout the Award Process. These are:

1. Information that ComReg is given, holds and stores , which is not publicly available and if released would be injurious to a company in that company secrets, structure, business strategy, bidding strategy, etc could be released to other market players;
2. Information that would allow other bidders or interested parties in the auction to know with certainty or reasonably infer the identity of some or all of the other bidders taking part in the auction;
3. Information, save such information as is to be disclosed to all bidders by virtue of the auction rules. that would allow other bidders or interested parties in the auction to know with certainty or reasonably infer how many other bidders (without knowing their identity) are taking part in the auction; and
4. Information on the progress of the bidding in the auction to prevent gaming or collusion.

¹⁰⁹ As ComReg is in the process of obtaining detailed advice in relation to the appropriate information security process to utilise in relation to the Award Process, this position is likely to evolve in the near term.

6.103 ComReg has implemented and is in the process of implementing enhancements to the physical and logical controls over the

- acquisition;
- access;
- use;
- transfer;
- retention; and
- disposal

of Award Process information to bolster its information security protocols and render them more robust and fit for purpose. The practical enhancements made to its information-management procedures, include but are not limited to the following:

- the Questions and Answers procedure has been modified to permit the submission of questions in hardcopy format in order to ensure the anonymity of questioners;
- the Application procedure has been altered to ensure the anonymity of Applicants vis-à-vis all parties except ComReg and its consultants and professional advisors ;
- ComReg has engaged a reputable consultancy organisation to provide advice to ComReg on ComReg's confidentiality and security processes before, during and after the auction and ensure these are properly applied throughout the Award process; and
- the EAS within the Award Process will have additional safeguards for the confidentiality of Bidder's information.

ComReg considers that it would not be appropriate for it to set out in detail its various enhanced protocols in respect of its information-management and security for the auction process, especially in a published document, as to do would tend to provide insights into those protocols that could compromise their effectiveness.

6.104 ComReg notes that it may be necessary to use confidential information in any proceedings arising from the Award Process and ComReg reserves the right, at its sole discretion, to utilise such information in any such proceedings.

Chapter 7

7 Next Steps

- 7.1 Table 9 of Chapter 3 of Document 12/52 (ComReg Information Memorandum) sets out the timetable and listing of the next steps for the Award Process.
- 7.2 In anticipation of receiving correspondence on matters relating to this document, the Information Memorandum (12/52) and the Award Process generally, ComReg hereby gives notice that it will publish all material correspondence received in this regard. Such information will be subject to the provisions of ComReg's published guidelines on the treatment of confidential information (ComReg Document 05/24).
- 7.3 Accordingly, ComReg will process Questions received within the stipulated period (as set out in Table 9 of Document 12/52). Questions and corresponding answers will be published concurrently on ComReg's website. ComReg will not reply directly to these questions.
- 7.4 In the interests of expediency, ComReg requires that any questions containing confidential material¹¹⁰ be accompanied by a redacted, non-confidential version of the question. Should a question that is deemed confidential by its submitter not be accompanied by a redacted, non-confidential version, ComReg will not accept the question as being validly submitted, nor will ComReg publish the question or on its website or address the matters raised therein.

¹¹⁰ Note, unless a question is explicitly denoted confidential, ComReg will assume that the querist considers the question non-confidential. In this regard, ComReg would then have the authority to publish the question in whole or parts as it deems appropriate, in line with ComReg Document 05/24