

IN THE MATTER OF AN APPLICATION TO
AN BORD PLEANÁLA

FOR APPROVAL OF (I) THE N6 GALWAY CITY RING ROAD
PURSUANT TO SECTION 51 OF THE ROADS ACT 1993 (AS
AMENDED); (II) THE N6 GALWAY CITY RING ROAD
MOTORWAY SCHEME 2018; and (III) THE N6 GALWAY CITY
RING ROAD PROTECTED ROAD SCHEME 2018

ABP Ref. ABP-302848-18 and ABP-302885-18

ORAL HEARING

STATEMENT of Evidence

Responses to Material Assets Agricultural
Objection/Submissions

by

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1 Qualifications and Experience

- 1.1 My name is Con Curtin. I am an agricultural consultant with Curtin Agricultural Consultants Ltd. based in Kilkenny. I hold a Bachelor's Degree in Agricultural Science, having qualified from University College Dublin in 1987 and I hold a Level 6 Certificate in Land Drainage having completed a Land Drainage course with Teagasc in 2016. I am a member of the Agricultural Consultants Association and the Agricultural Science Association. I have over 29 years' experience in agricultural consultancy in Ireland and I am an approved farm advisor listed in the Farm Advisory System on the Department of Agriculture, Food, and the Marine website, and as such I receive training to advise farmers how to apply for schemes such as GLAS (Green Low-carbon Agri-environmental Scheme), Basic Payment, Targeted Agricultural Modernisation Scheme, Nitrates Derogation and other Department of Agriculture, Food, and the Marine schemes. I work for Gas Networks Ireland, Transport Infrastructure Ireland, Irish Water and various Local Authorities advising on a wide range of agricultural issues such as agricultural impacts on farms, land re-instatement, land drainage and compensation.
- 1.2 I have carried out agricultural impact assessments and route selection assessments on many national road developments over the past 20 years, for example the M20 Cork Limerick Motorway Scheme which is 80kms in length, the N22 Macroom to Ballyvourney Road which is 24km in length, the N25 Waterford Bypass which is 40km in length and the M7 Castletown to Nenagh Road which is 40km in length. In total I have carried out agricultural impact assessments and route selection assessments on over 400km of new road developments in Ireland, on at least 20 national road projects and I have given evidence at ten oral hearings for road developments.

2 Role in Proposed Road Development

- 2.1 My role in the N6 Galway City Ring Road (GCRR) Project involved undertaking the material assets agricultural appraisal in respect of the proposed road development and to advise in relation to the baseline agricultural environment, assessing impacts on farms and recommending mitigation measures to minimise impacts. I have been involved with the project team on the proposed road development throughout the design process and the preparation of application documentation. I confirm that I am the author of Chapter 14, Material Assets – Agriculture, Volume 2 of the EIAR and Appendix A.14.1 of Volume 4 of the EIAR. In this statement, in order to set the context within which to respond to submissions and observations made, I provide a brief summary of the key issues in relation to agriculture, addressing the baseline environment, mitigation measures, residual impacts before responding in detail to issues raised in the submissions and observations made to An Bord Pleanála.

3 Key issues in relation to Material Assets Agriculture

- 3.1 Chapter 14 of the EIAR is to be taken as read in its entirety and is not replicated here. To assist the Board in its consideration of this application for Approval and for the convenience of all participants at this hearing, the key items pertaining to the material assets agriculture assessment of the road development detailed in Chapter 14 of the EIAR are summarised briefly below.
- 3.2 Section 14.3.1 of Chapter 14 of the EIAR describes existing agriculture along the proposed road development and the location of affected land parcels is illustrated in Figures 14.1.1 to 14.1.14 of Volume 3 of the EIAR. There are 195 affected land parcels, that is 1,096 hectares, within the study area along the proposed road development with an average size of 6 hectares and approximately 21% of land parcels are less than 1 hectare in size and therefore have very limited agricultural potential. The main farm enterprises identified are:
- beef and/or sheep and hay or silage – 63% of land parcels
 - horses and other enterprises – 17.5% of land parcels
 - not actively farmed – 16.5% of land parcels
 - dairy – 3% of land parcels
- 3.3 Table 14.5 of Chapter 14 of the EIAR shows that there is a high proportion of land parcels that are not actively farmed at all (16.5%). These plots are generally bog and poor quality land overgrown with scrub or very small land fragments.
- 3.4 Table 14.5 of Chapter 14 of the EIAR shows that when compared to national or county statistics (2010 Agricultural Census) there is a higher number of equine land parcels along the proposed road development. There are 31 equine land parcels (16% of the total) along the proposed road development compared to less than 1% both nationally and for County Galway. There are a further 15 beef land parcels (8% of the total) that also have horses as a secondary enterprise. Therefore, 46 land parcels or 24% of the total number have equine enterprises along the proposed road development compared to 12% of all farms nationally and 16% of all farms in County Galway which have horses – this information is based on Table 8D of the 2010 CSO Agricultural Census data¹. The high number of equine enterprises is due to many of the small land parcels being used only to keep ponies and horses for leisure purposes. Only four of these equine land parcels are considered to be high or very high sensitivity.
- 3.5 The potential impacts arising – in the absence of mitigation – are:
- Loss of land and farm buildings
 - Severance of land parcels and resulting land separation

¹ <https://www.cso.ie/en/releasesandpublications/ep/p-fss/farmstructuresurvey2016/da/fs/> - Table 2.2

- Disturbance to farming operations and livestock during the construction and operational phases, for example, potential impacts due to noise and traffic and potential impacts on land drainage
- 3.6 The mitigation measures proposed in Sections 14.6.2 and 14.6.3 of Chapter 14 of the EIAR will ensure that impacts on Material Assets Agriculture during the construction and operational phase of the proposed road development are minimised.
- 3.7 During the construction phase mitigation measures will include:
- a) Provision of a key contact person to facilitate communications between affected landowners and the contractor
 - b) Provision of access to all retained land. Where temporary disruptions to this access occur, landowners will be notified in advance
 - c) Where water and power supplies are disrupted, the contractor will provide alternative water and power supplies
 - d) Provision of suitable boundary fencing
 - e) Notification to landowners in advance of rock breaking, blasting or piling activities
 - f) Provision of mitigation measures to protect surface and ground water quality as described in Section 10.6.2.1 of Chapter 10 of the EIAR where it states that; *'any spillages will be immediately contained and contaminated soil properly disposed of'* and in Section 11.6.2 of the EIAR where it notes that settlement ponds, silt traps and bunds will be used to minimise silt contamination of surface water run-off and *'where pumping of water is to be carried out, filters will be used at intake points and discharge will be through a sediment trap or sedi-mat'*. These measures will protect the quality of water for livestock
 - g) Section 16.6.2.1 of Chapter 16 of the EIAR states that, *'Spraying of exposed earthwork activities and site haul roads during dry weather'* will be implemented to minimise dust emissions
 - h) Provision of effective land drainage mitigation so that adequate drainage outfall will be maintained
- 3.8 During the operational phase these mitigation measures include:
- a) Access will be provided or maintained to all separated land parcels
 - b) Affected water and electricity supplies will be restored permanently
 - c) Water from the proposed road development will be diverted to attenuation ponds before discharging to watercourses or to ground
 - d) The drainage design of the proposed road development will intersect existing field drains and carry the drainage water to suitable outfalls

- e) Landscaping along the proposed road development will minimise the visual impact on farms along the route of the proposed road development and will over time provide shelter in affected farms
- 3.9 In addition to the above mitigation measures there is one additional commitment. Galway County Council will employ a veterinary specialist to liaise with landowners to ensure that livestock welfare is adequately addressed.
- 3.10 The proposed road development will acquire 219 hectares (20% of the study area) and will sever 62 land parcels and 172 hectares of land. Small farm buildings will be demolished on 17 land parcels – landowners will be compensated so as to be in a position to replace these on their retained land. The residual and cumulative impacts on affected land parcels are assessed in Appendix A 14.1 of the EIAR and summarised in Sections 14.7.2, 14.7.3 and 14.7.4 of Chapter 14 of the EIAR. Approximately half of the affected land parcels will have adverse residual impacts which are relatively small in scale, that is, impacts which are ‘not significant’ or ‘slight adverse’. Approximately one quarter will have medium scale or ‘moderate’ adverse impacts and the remaining one quarter will have adverse impacts which are large in scale, that is, impacts which are significant adverse, very significant adverse and profound. Large-scale impacts will result in changes to the character, functionality and viability of these land parcels. Section 14.7.4 of the EIAR addresses cumulative impacts. Four land parcels at the eastern end of the proposed road development were also affected by the N6 Galway to Ballinasloe road development. While there are significant cumulative impacts on these four land parcels, the overall cumulative effects on agriculture within the study area or within the region from other similar recently planned and constructed road developments is not significant.
- 3.11 There are no cumulative impacts from the current National University of Ireland Galway planning permission application Ref 19/373 to construct additional playing pitches because this land is not agricultural.
- 3.12 The Parkmore Link Road Modification was examined to determine potential agricultural impacts. This modification would affect two land parcels MO_693 and MO_694. While there would be additional adverse impacts on both land parcels the significance of impact will increase only in land parcel MO_694 where the predicted impact will increase from moderate adverse to significant adverse. The agricultural impact from the additional land-take of 0.22 ha is not significant when assessed in relation to the study area or wider region.
- 3.13 The cumulative impact of a Strategic Housing Development (SHD) application for 238 residential units made to ABP on 24 June 2019 on the lands to the south of the proposed road development in plot 229 would reduce the agricultural area of this land parcel increasing the proportionate land-take and reducing the effect from severance. Therefore, overall there would be no change to the assessment of impacts on this land parcel due to this planning application.

- 3.14 As stated in Section 14.7.3 of Chapter 14 of the EIAR the impact on agriculture within the entire study area along the proposed road development is moderate adverse due to the loss of 20% of the agricultural area.
- 3.15 When the cumulative impacts of other recently planned and constructed road schemes are considered, the regional impact on agriculture within County Galway is not significant. As stated in Section 14.7.4 of Chapter 14 of the EIAR, the combined landtake of this proposed road development and other developments such as M6, M18, N59 Moycullen, M6/M17/M18 service motorway etc will not exceed 1% of the agricultural area of County Galway and, therefore, the cumulative impact at regional level is not significant.

4 Responses to Submissions/Objections

4.1 Overview

- 4.1.1 88 of the 296 submissions/objections made to An Bórd Pleanála (ABP) in respect of the N6 Galway City Ring Road (GCRR) Environmental Impact Assessment Report (EIAR), Natura Impact Statement (NIS), Motorway Scheme (MS) and Protected Road Scheme (PRS) include observations relevant to Material Assets - Agriculture. None of the 17 submissions received in relation to the Request for Further Information Response related to Material Assets – Agriculture. The issues raised are:
- potential impacts on retained land in terms of:
 - extents of landtake
 - concerns relating to agricultural viability and effects on farm enterprises on retained lands
 - the issue of access during construction and operation of the proposed road development
 - impacts due to noise and vibration
 - impacts due to dust, dirt and air emissions during construction
 - general disturbance, including impacts to services (water and power) during construction and operational phases causing inconvenience
 - potential impact on land drainage and risk of flooding
 - light pollution from vehicles and street lighting
 - safety of farming the retained lands
 - impact on farm buildings
 - proposed boundary treatment including, visual impacts and inadequate landscape proposals
 - impacts on private wells and natural drinking water sources

- additional risk of trespass and unsociable behaviour and an increased safety risk on lands adjoining the proposed road development
- adequacy of the agricultural assessment of impacts
- impacts on horses

4.2 Potential impact on Retained lands - Extent of landtake

Issue

- 4.2.1 32 submissions/objections object to their lands being acquired and/or claims that surplus lands are being acquired: Ob_102, Ob_103, Ob_106, Ob_111, Ob_145, Ob_198, Ob_226, Ob_238, Ob_239, Ob_255/256, Ob_272, Ob_273, Ob_457, Ob_480, Ob_485, Ob_495, Ob_496, Ob_553, Ob_566, Ob_570, Ob_571 Ob_603, Ob_626, Ob_629, Ob_631, Ob_651, Ob_684_551, Ob_688, Ob_705, Ob_716, Ob_751 and Ob_754.
- 4.2.2 One submission/objection, Ob_251, seeks clarity as to why a small plot to the rear of their field is being acquired.
- 4.2.3 One submission/objection, Ob_255_256 seeks clarity as to why a plot 255c.201 is being permanently acquired.

Response

- 4.2.4 Ms Eileen McCarthy's Statement of Evidence confirms that only lands that are necessary for the construction and operation of the proposed road development are proposed to be acquired, and therefore, there are no lands surplus to this requirement.
- 4.2.5 The plot to the rear of the field is proposed to be acquired from plot reference 251 to provide access for surface water drainage.
- 4.2.6 Plot 255c.201 is required to facilitate the construction of a new access to the property.

4.3 Potential impacts on Retained Lands – viability of retained lands

Issue

- 4.3.1 10 submissions/objections raise concerns relating to potential impacts to their retained agricultural lands: Ob_102, Ob_105, Ob_156, Ob_167, Ob_168, Ob_177, Ob_205, Ob_208, Ob_211 and Ob_212.
- 4.3.2 Six submissions/objections suggest that there will be an increased difficulty in farming their retained lands: Ob_108, Ob_216, Ob_230, Ob_273, Ob_701, and Ob_751.

Response

- 4.3.3 This potential impact relates to the residual impact on farm enterprises on retained lands.
- 4.3.4 The residual impact on retained lands in relating to Ob_156, Ob_167, Ob_212 and Ob_216 is ‘not significant’. The residual impact on lands relating to Ob_105, Ob_108, Ob_168, Ob_205, Ob_208 and Ob_211 is ‘moderate adverse’. The residual impact on lands relating to Ob_230 and Ob_273 is ‘significant adverse’. The residual impact on lands relating to Ob_701 is very significant adverse and the impact on Ob_751 is ‘profound’. The agricultural impact on these retained lands has been assessed in Chapter 14 of the EIAR. The impacts on individual farms are detailed on a case by case basis in Appendix A.14.1 of the EIAR and summarised in Table 14.7 and Section 14.8 of Chapter 14 of the EIAR.
- 4.3.5 For the moderate adverse impacts listed above the existing farm enterprise can continue but with increased difficulty, requiring additional management resources. For example, the farm enterprises relating to Ob_108, Ob_168, Ob_205 and Ob_211 are severed by the proposed road development creating additional livestock movements and journey times.
- 4.3.6 The significant and very significant impacts in Ob_230, Ob_273 and Ob_701 are as a result of severance and loss of a large proportion of the land parcels. The scale of the existing beef enterprises will be reduced significantly due to loss of land and there will be major increase in management resources required due to severance.
- 4.3.7 The profound impact on the property relating to Ob_751 arises due to the combined effect of previous N6/M6 road development in Doughiska, the extent of land take and the very high sensitivity of the equine enterprise. A profound impact will result in a dramatic change in the operation and scale of the enterprise on the affected land parcel.

4.4 Access to Retained Lands during the construction phase

Issue

- 4.4.1 50 submissions/objection raise concerns relating to maintaining access to retained lands during the construction period and many of these are seeking assurance that access will be maintained during the construction phase.
- 4.4.2 The following submissions/objections raise this concern: Ob_103, Ob_105, Ob_108, Ob_115, Ob_117, Ob_145, Ob_147, Ob_156, Ob_167, Ob_168, Ob_177, Ob_197, Ob_199, Ob_205, Ob_208, Ob_209, Ob_211, Ob_212, Ob_213, Ob_217, Ob_226, Ob_230, Ob_233, Ob_239, Ob_246, Ob_249, Ob_250/466, Ob_251, Ob_254, Ob_255/256, Ob_259, Ob_272, Ob_273, Ob_311, Ob_480, Ob_481, Ob_484, Ob_485, Ob_496, Ob_498, Ob_506, Ob_603, Ob_626, Ob_628, Ob_629, Ob_631, Ob_632, Ob_684/551, Ob_750 and Ob_757.

Response

- 4.4.3 Appendix A.14.1 of the EIAR shows that properties relating to Ob_108, Ob_115, Ob_117, Ob_145, Ob_147, Ob_168, Ob_205, Ob_208, Ob_209, Ob_213, Ob_226, Ob_239, Ob_259, Ob_272_273, Ob_484, Ob_506 and Ob_626 are severed by the proposed road development, creating separated land parcels, and therefore these landowners are most likely to experience temporary severance or interruption of access during the construction period. Section 14.6.2 of Chapter 14 of the EIAR states that adequate access across the proposed road development will be maintained for these land parcels during construction by providing temporary crossing points for livestock and machinery until the permanent access accommodation works are in place. Where temporary disruptions to access occurs landowners will be notified in advance. Section 14.5.3 of Chapter 14 of the EIAR states that, during the construction phase, these impacts are generally in the not significant – slight adverse range because of the relatively short duration i.e. less than 36 months and because access will be provided by the contractor.
- 4.4.4 A key contact / liaison person will be employed by the contractor to insure that access requirements are communicated to the contractor and that the contractor will facilitate access to separated lands.
- 4.4.5 The properties relating to Ob_103, Ob_105, Ob_156, Ob_167, Ob_197, Ob_199, Ob_211, Ob_212, Ob_217, Ob_230, Ob_233, Ob_246, Ob_249, Ob_250/466, Ob_251, Ob_254, Ob_255/256, Ob_260, Ob_311, Ob_480, Ob_481, Ob_485, Ob_496, Ob_498, Ob_603, Ob_628, Ob_629, Ob_631, Ob_632, Ob_684_551, Ob_750 and Ob_757 while not severed by the proposed road development may experience inconvenience and temporary disruption due to construction activity and traffic. Where this is likely to occur the key contact / liaison person will notify potentially affected landowners so that effective access can be maintained, and disturbance minimised. Also the contractor is required to have a construction traffic management plan in place to minimise impacts to access on local roads – as outlined in Section of 11 of Appendix A.7.5 of the EIAR.

4.5 Access to retained lands during the operational phase

Issue

- 4.5.1 57 of the submissions/objections express their concerns relating to access during the operational phase: Ob_102, Ob_103, Ob_105, Ob_108_125, Ob_115, Ob_117, Ob_145, Ob_147, Ob_156, Ob_167, Ob_168, Ob_177, Ob_197, Ob_205, Ob_208, Ob_211, Ob_212, Ob_213, Ob_226, Ob_229, Ob_230, Ob_233, Ob_239, Ob_250_466, Ob_251, Ob_259, Ob_272, Ob_273, Ob_312, Ob_457, Ob_480, Ob_485, Ob_486, Ob_495, Ob_498, Ob_506, Ob_509, Ob_553, Ob_562, Ob_563, Ob_566, Ob_570, Ob_571, Ob_580, Ob_603, Ob_626, Ob_627, Ob_628, Ob_629, Ob_631, Ob_632, Ob_651, Ob_684_551, Ob_688, Ob_705_625, Ob_750 and Ob_757.

- 4.5.2 One submission/objection, Ob_216, states that the access to an agricultural shed will be severely restricted.
- 4.5.3 One submission/objection, Ob_506, expresses concerns that the proposed accommodation road *'is seriously restrictive, has six right angle bends and will not be suitable for development'*.

Response

- 4.5.4 The proposed access details included in the EIAR were further clarified in Appendix A.9.1 of the Request of Further Information (RFI) Response submitted to the Board 30 August 2019. These access roads and gates will insure that there is permanent access to all retained lands. The access roads referred to below are at least 4.0m wide with a 1m grass verge either side which is wide enough for any agricultural machinery. The details of the access road widths and who they are provided for are included in Section 9.4 of the RFI Response.
- 4.5.5 Ob_102: a new access gate on an access road AR 0/01 will provide access to retained lands as shown in Figure 4.1.01 of Appendix A.9.1.
- 4.5.6 Ob_103: access road AR 0/01 will provide an entrance to the farm yard as shown in Figure 4.1.01 of Appendix A.9.1.
- 4.5.7 There will be no change in the existing access arrangements to the retains lands for Ob_105, Ob_115, Ob_147, Ob_156, Ob_177, Ob_211, Ob_212, Ob_233, Ob_480, Ob_485, Ob_498, Ob_509, Ob_562, Ob_628, Ob_629, Ob_631, Ob_632, Ob_684_551, Ob_750 and Ob_757. There is an existing access to the east of the severed plot for Ob_115.
- 4.5.8 Ob_108_125: access road AR0/02 will provide access to severed land to the west of the proposed road development in Forramoyle West as shown in Figure 4.1.01 of Appendix A.9.1. Further north in the same townland the existing boundary and access gate will be maintained in plot 108 and access will be maintained to the dwelling house plot 125 as shown in in Figure 4.1.02 of Appendix A.9.1.
- 4.5.9 Ob_117: access will be provided to severed lands to the west of the proposed road development via access road AR 0/04. Access road AR 0/3 only provides access to the attenuation pond. This is shown in in Figure 4.1.02 of Appendix A.9.1.
- 4.5.10 Ob_145: access road AR 1/03 on the southern side of the proposed road development will provide access to severed land in Forramoyle East, while a new access gate on the existing Forai Maola Road will be provided to land to the north of the proposed road development – as shown in Figure 4.1.02 of Appendix A.9.1.
- 4.5.11 Ob_167: access road AR 2/02 on the northern side of the proposed road development will provide access to land in Trusky West as shown in Figures 4.1.03 and 4.1.04 of Appendix A.9.1.
- 4.5.12 Ob_168: access road AR 2/02 on the northern side of the proposed road development will provide access to severed land in Trusky West as shown in Figure 4.1.04 of Appendix A.9.1.

- 4.5.13 Ob_197: a field gate on the Aille Road (L5384) will provide access to severed land in Ballard East, on the northern side of the proposed road development and a field gate on access road AR 3/02 will provide access to the lands to the south of the proposed road development, as shown in Figure 4.1.05 of Appendix A.9.1.
- 4.5.14 Ob_205: a field gate on access road AR 3/02 on the southern side of the proposed road development will provide access to severed land in Ballard East as shown in Figure 4.1.05 of Appendix A.9.1.
- 4.5.15 Ob_208: a field gate on access road AR 3/02 on the southern side of the proposed road development will provide access to severed land in Aille as shown in Figure 4.1.05 of Appendix A.9.1.
- 4.5.16 Ob_213: access road AR 4/03 will replace the existing entrance into farm yard on the Cappagh Road. Further north access road AR 4/05 which gives access from the Cappagh Road to the severed Boleybeg Boithrín and thereby provides access to severed lands further north along the Boleybeg Boithrín. This is shown in Figure 4.1.06 of Appendix A.9.1.
- 4.5.17 Ob_216: a gate on access road AR 4/05 will provide access to the agricultural shed as shown in Figure 4.1.06 of Appendix A.9.1.
- 4.5.18 Ob_226: access road on the southern side of the proposed road development will link the severed Boleybeg Botherín to the existing severed entrance lane to the house as shown in Figure 4.1.06 of Appendix A.9.1. Also shown in this figure is access road AR 4/05 which provides access to the Boleybeg Botherín and to severed land to the north of the proposed road development.
- 4.5.19 Ob_229: access will be provided on to the Ballymoneen Road with two new gates, one north of and one south of the proposed road development, as shown in Figure 4.1.08 of Appendix A.9.1.
- 4.5.20 Ob_230: a new gate on access road AR 05/01 will provide access to severed access lane into the farm yard and house as shown in Figure 4.1.08 of Appendix A.9.1. The retained land is accessed from this gate and entrance lane.
- 4.5.21 Ob_239: a new gate on the Ragoon Road will provide access to a severed field on the northern side of the proposed road development. A gate on access road AR 06/03 will provide access to severed field north of the proposed road development as shown in Figure 4.1.09 of Appendix A.9.1.
- 4.5.22 Ob_250_466: access road AR 07/04 will provide access to separated land on the southern side of the proposed road development. When temporary works are completed on a surface drain at this location the temporary fencing will be removed and the landowner will have access across this drain as shown in Figure 4.1.10 of Appendix A.9.1.
- 4.5.23 Ob_251: two new gates on the Letteragh Road (L1323) will provide access to retained lands as shown in Figure 4.1.10 of Appendix A.9.1.

- 4.5.24 Ob_259: access road AR 07/05 north of the Letteragh Road will provide access to an existing access lane, which leads to a severed plot, as shown in Figure 4.1.10 of Appendix A.9.1.
- 4.5.25 Ob_272: a gate on access road AR 07/05 will provide access to severed land on the north/western side of the proposed road development. A gate on access road AR 07/07 will provide access to severed field on the eastern side of the N59 Link Road South as shown in Figures 4.1.10 and 4.1.25 of Appendix A.9.1.
- 4.5.26 Ob_273: two new gates on the Letteragh Road will provide access to severed land at each side of the proposed road development as shown in Figure 4.1.10 of Appendix A.9.1.
- 4.5.27 Ob_312: access road AR 06/02 will provide access from the realigned Clybaun Road to the dwelling and farm yard. The existing road and gate will not be changed in front of the farm yard. A new field access gate to retained lands will be provided as shown in Figure 4.1.09 of Appendix A.9.1.
- 4.5.28 Ob_457: access road AR 07/09 will provide access from the N59 Link Road North to the retained land as shown in Figure 4.1.10 of Appendix A.9.1.
- 4.5.29 Ob_486: access road AR 07/06 will provide access from the Letteragh Road to the dwelling – effectively access road AR 07/06 is a realigned entrance to the site. Access to the retained land is via a gate on access road AR 07/07 off the N59 Link Road South. This is shown in Figure 4.1.25 of Appendix A.9.1.
- 4.5.30 Ob_495: the entire plot will be acquired and therefore the landowner will not have access to it.
- 4.5.31 Ob_506: access road AR 07/10 located off the Circular Road will provide access to severed land at the south side of the proposed road development as shown in Figure 4.1.11 of Appendix A.9.1. Access road AR 07/10 is 160m long and the carriageway is 4m wide with 1m verges on each side and is designed for the safe movement of traffic.
- 4.5.32 Ob_553: access road AR 09/02 which will traverse beneath the proposed road development will provide access along this Bótherín to severed field on the south east side – as shown in Figure 4.1.13 of Appendix A.9.1. For separated land farmed just east of the Sean Bóthar in Menlo, access roads AR 10/03 and AR 10/04 will provide access from the Sean Bóthar. This is shown in Figure 4.1.14 of Appendix A.9.1.
- 4.5.33 Ob_563: access road AR 10/01 will provide access to land just west of the Bóthar Nua as shown in Figure 4.1.13 of Appendix A.9.1. Separated land just east of the Sean Bóthar in Menlo will be accessed via access road AR 10/03 from the Sean Bóthar as shown in Figure 4.1.14 of Appendix A.9.1.
- 4.5.34 Ob_566: access road AR 10/01 will provide access to land west of the Bóthar Nua and separated to the south of the proposed road development as shown in Figure 4.1.13 of Appendix A.9.1.

- 4.5.35 Ob_570: access to the separated lands north of the proposed road development will be possible under the Menlough Viaduct and the access to the lands south of the proposed road development will not change.
- 4.5.36 Ob_571: access to the retained lands will remain from the Sean Bóthar because the proposed road development will bridge over Sean Bóthar as shown in Figure 4.1.14 of Appendix A.9.1.
- 4.5.37 Ob_580: access to the retained lands separated north of the proposed road development will be provided via gates on access road AR10/07 as shown in Figure 4.1.14 of Appendix A.9.1.
- 4.5.38 Ob_603: access road AR 11/02 will provide access to the N84 Headford Road as shown in Figure 4.1.16 of Appendix A.9.1. This new access road will maintain access from the farm buildings to N84 Headford Road.
- 4.5.39 Ob_626: for lands separated to the east of the N84 Headford Road access road AR 12/04 off School Road in Castlegar, will provide access as shown in Figures 4.1.16 and 4.1.17 of Appendix A.9.1.
- 4.5.40 Ob_627: access road AR 12/04 off School Road in Castlegar will provide access to severed land at the northern side of the proposed road development. For land separated to the east of the School Road in Castlegar, AR 13/02 will provide access. This is shown in Figure 4.1.17 of Appendix A.9.1.
- 4.5.41 Ob_651: access road AR 13/02 from School Road in Castlegar will provide access to severed land at the northern side of the proposed road development as shown in Figure 4.1.17 of Appendix A.9.1.
- 4.5.42 Ob_688: a new gate will be provided to replace existing gate access on the N83 Tuam Road as shown in Figure 4.1.18 of Appendix A.9.1.
- 4.5.43 Ob_705_625: access to the retained severed lands north of the proposed road development will be provided via access road AR13/02 as shown in Figure 4.1.17 of Appendix A.9.1. Also temporary fencing at a narrow pinch point will be removed after construction to allow permanent access across this narrow piece of ground.

4.6 Potential impacts to retained lands - Noise

Issue

- 4.6.1 52 submissions/objections raise concerns of the potential impacts to retained lands due to noise: Ob_102, Ob_105, Ob_108, Ob_111, Ob_115, Ob_117, Ob_145, Ob_156, Ob_167, Ob_168, Ob_177, Ob_199, Ob_205, Ob_208, Ob_209, Ob_211, Ob_212, Ob_213, Ob_216, Ob_217, Ob_229, Ob_230, Ob_238, Ob_239, Ob_251, Ob_272, Ob_273, Ob_311, Ob_312, Ob_468_501, Ob_485, Ob_486, v498, Ob_499, Ob_505, Ob_507, Ob_510, Ob_571, Ob_603, Ob_626, Ob_628, Ob_629, Ob_631, Ob_632, Ob_651, Ob_688, Ob_684_551, Ob_705_625, Ob_716, Ob_750, Ob_751 and Ob_757.

Response

- 4.6.2 Ms Jennifer Harmon will address noise impacts on humans in her statement of evidence. My response below relates to impacts on livestock.
- 4.6.3 Noise and vibration is considered as a source of disturbance to livestock and this impact is assessed in Section 14.5.3 of Chapter 14 of the EIAR states that: “General construction noise and vibration will have not significant or slight adverse impacts. Rock breaking/blasting and piling activities may result in a flight response in livestock but rarely causes a significant impact, particularly with mitigation, and will have not significant or slight adverse impacts”. Section 14.6.2 of Chapter 14 of the EIAR states: “A key contact person will be appointed during the construction phase to facilitate communications between affected landowners and to facilitate the re-organisation of farm enterprises by farmers during critical times”, and “Landowners with lands adjoining sites where either rock breaking, blasting or piling takes place will be notified in advance of these activities”. The agricultural impact assessment assumes a “worst case” scenario that construction disturbance due to noise can last up to 36 months at a given location. Therefore any of the affected land parcels listed in in the above submissions (paragraph 4.6.1) may be affected for the duration of the construction period. However, in reality, this “worst case” scenario can never arise because the periods of construction noise at any given location will generally last for several months at most during the overall three-year construction period.
- 4.6.4 Livestock very quickly adapt to construction machinery noises, vibrations and movements and will graze land adjoining new roads during the construction and operational phases. However, during the construction phase, livestock may react in an unpredictable manner where there are sudden changes in the grazing environment and there is the potential for injury due to the flight response. For example, at the commencement of a construction activity or rock breaking or rock blasting. There will be an increased time requirement from landowners during the construction phase to manage and monitor their livestock. This is part of the disturbance impact for the duration of the construction phase which is addressed in Section 14.5.3 of Chapter 14 of the EIAR and for individual land parcels in Appendix A.14.1 of the EIAR. The impact from this disturbance is assessed to be

not significant to slight adverse because of the temporary duration and because noise does not have a significant effect on livestock. Good communications between the contractor and landowners, which will notify landowners in advance of rock breaking or rock blasting, is essential to allow landowners to manage their livestock during the construction phase.

4.6.5 Figures 7.201 and 7.302 of the EIAR show the proposed and possible blasting sites (possible blasting sites are indicated with an asterix in the following list). Ob_102, Ob_105, Ob_108, Ob_111, Ob_115, Ob_117, Ob_145*, Ob_168, Ob_177, Ob_199, Ob_205, Ob_208, Ob_211, Ob_212*, Ob_213, Ob_229*, Ob_230, Ob_238*, Ob_272, Ob_273*, Ob_311, Ob_468_501, Ob_498, Ob_499*, Ob_505, Ob_507, Ob_603*, Ob_626, Ob_628, Ob_629, Ob_631, Ob_632, Ob_688, Ob_705_625, Ob_716*, Ob_750* and Ob_751 are adjoining proposed and potential blasting sites. Blasting will be equivalent to a gun blast or clap of thunder in terms of noise effect. It is instantaneous and while it is accompanied with air and ground vibrations there is no visual stimuli which is usually required to cause a sustained flight response in livestock. For either rock breaking or blasting it is initially recommended to temporarily remove livestock from the direct vicinity of blasting, for example small fields adjoining the rock blasting / breaking site. When livestock become accustomed to blasting / breaking they can be re-introduced to the adjoining fields. The liaison person working for the contractor will notify affected landowners in advance of rock blasting or breaking.

4.6.6 Of the submissions listed in 4.6.1 above submissions / objections Ob_115, Ob_117, Ob_167, Ob_211, Ob_216, Ob_498, Ob_505, Ob_507, Ob_632, Ob_750 and Ob_751 are listed in Appendix A.14.1 of the EIAR as having horses on the land. The impacts on horses from noise is addressed in Mr Saddler's statement of evidence. Galway County Council will employ a veterinary specialist for the duration of the construction contract to liaise with these landowners to ensure the welfare of livestock is adequately addressed.

4.7 Potential impact on Retained lands - Dust, Dirt and Air Pollution

Issue

- 4.7.1 16 submissions/objections raise concerns of potential impacts on their retained lands relating to dirt or mud from the proposed construction activity: Ob_102, Ob_105, Ob_115, Ob_156, Ob_167, Ob_168, Ob_177, Ob_205, Ob_208, Ob_211, Ob_212, Ob_217, Ob_603, Ob_632, Ob_750 and Ob_751.
- 4.7.2 A further three submissions/objections raise concerns of potential impacts relating directly to dust and air pollution: Ob_111, Ob_505, and Ob_757.

Response

- 4.7.3 As discussed in Section 14.6.2 of Chapter 14 of the EIAR, there are potential construction impacts due to dust generated during the construction of the proposed road development. The generation of dust is, however, a temporary impact and it will not have a significant impact on grazing livestock who have a high tolerance to elevated clay/soil content in grass² and are not sensitive to air dust particles in outdoor situations. Dust from construction sites does not cause eye irritation or respiratory problems for grazing livestock in the same vicinity.
- 4.7.4 Chapter 16, Air Quality and Climate, of the EIAR and the Construction Environmental Management Plan (CEMP) in Appendix A.7.5 of the EIAR include mitigation measures for dust such as control of vehicle speeds and speed restrictions, spraying of exposed earthwork activities and site haul roads during dry weather, provision of wheel washes at exit points and sweeping of hard surface roads. The CEMP also sets out requirements which will be implemented during construction with respect to dust.
- 4.7.5 When ‘dirt’ dries out it may become airborne and cause dust. However, it may also become transported via surface water drainage in the run-off from the proposed road development. The sediment Erosion and Pollution Control Plan (Section 8 of the CEMP in Appendix A.7.5) along with a suite of mitigation measures in Section 11.6.2 of the EIAR will control run-off from the proposed road development during the construction phase. The drainage design which provides infiltration basins and attenuation ponds throughout the proposed road development will maintain surface water quality in the operational phase.
- 4.7.6 The potential impacts on all affected land parcels including those in Ob_102, Ob_105, Ob_111, Ob_115, Ob_156, Ob_167, Ob_168, Ob_205, Ob_208, Ob_211, Ob_212, Ob_217, Ob_603, Ob_632, Ob_750, Ob_751 and Ob_757 from air emissions and from dirt from the proposed road development during the operational phase are assessed as not significant in Section 14.5.4 of Chapter 14 of the EIAR. There are no statutory regulations or quality guidance documents in relation to meat or milk produced from farms beside motorways because there are

² In wet weather it is common for grazing grass, silage and in-situ fodder crops to contain high levels of soil/clay. Fodder beet fed to cattle contains up to 5% clay and commonly higher levels.

no known significant effects. Table 16.27 of Chapter 16 of the EIAR predicts maximum annual Nitrogen deposition rates of 1.27 kgs/ha/yr on land adjoining the proposed road development. This will not significantly affect grass growth or quality.

4.8 Disturbance to Services during Construction

Issue

- 4.8.1 47 submissions/objections raise concerns of general disturbance, including impacts to services (water and power) during construction phase causing inconvenience. Some of these submissions/objections also sought guarantees that any services interfered with would be maintained: Ob_102, Ob_103, Ob_105, Ob_108, Ob_115, Ob_117, Ob_145, Ob_147, Ob_156, Ob_167, Ob_168, Ob_177, Ob_197, Ob_199, Ob_205, Ob_208, Ob_211, Ob_212, Ob_213, Ob_216, Ob_217, Ob_233, Ob_239, Ob_246, Ob_249, Ob_250_466, Ob_251, Ob_254, Ob_255_256, Ob_259, Ob_272, Ob_273, Ob_311, Ob_480, Ob_481, Ob_485, Ob_496, Ob_498, Ob_506, Ob_575, Ob_603, Ob_626, Ob_628, Ob_629, Ob_631, Ob_684_551 and Ob_750.

Response

- 4.8.2 Section 14.5.3 of Chapter 14 of the EIAR and the individual land parcel assessments in Appendix A.14.1 of the EIAR acknowledge that there will be temporary disruption to power and water supplies. The contractor will maintain all services during construction. As discussed in Section 14.6.2 of Chapter of the EIAR, where existing water and electricity supplies are temporarily disrupted during the construction phase an alternative water source or electricity supply will be made available e.g. water tanker or connection to a power supply. If access to surface drinking water sources is permanently restricted, alternative groundwater supplies or compensation will be provided to enable farmers to drill their own well. With mitigation such as the provision of ducting for water pipes and power cables and the provision of water tankers and alternative water supplies, these disturbance impacts on services are assessed to be ‘not significant’ or ‘slight adverse’.

4.9 Potential impacts on Retained lands - Land Drainage and Flood Risk

Issue

- 4.9.1 42 submissions/objections raise concerns over potential impacts on existing land drainage and suggest that inadequate drainage details have been provided: Ob_103, Ob_108, Ob_117, Ob_145, Ob_147, Ob_194, Ob_197, Ob_207, Ob_216, Ob_230, Ob_233, Ob_226, Ob_230, Ob_238, Ob_239, Ob_246, Ob_249, Ob_250_466, Ob_251, Ob_254, Ob_255_256, Ob_259, Ob_272, Ob_273, Ob_311, Ob_457, Ob_468_501, Ob_480, Ob_481, Ob_484, Ob_485, Ob_496, Ob_498, Ob_626, Ob_628, Ob_629, Ob_631, Ob_651, Ob_684_551, Ob_688, Ob_716 and Ob_751.

- 4.9.2 The following submissions/objections also express concerns of an increased risk of flooding on their retained lands as a result of the proposed road development: Ob_103, Ob_145, Ob_194, Ob_216, Ob_238, Ob_239, Ob_249, Ob_250_466, Ob_251, Ob_259, Ob_273, Ob_273, Ob_311, Ob_468_501, Ob_485, Ob_496, Ob_498, Ob_626, Ob_629, Ob_631, Ob_635, Ob_651 and Ob_684_551.

Response

- 4.9.3 Tony Cawley will address the specific land drainage and flood risk issues in his statement of evidence. I will address the agriculture impacts of such risks.
- 4.9.4 The potential impact on land drainage is acknowledged in Section 14.5.3 of Chapter 14 of the EIAR and the mitigation measures in Section 14.6.2 of Chapter 14 and Section 11.7.1 of Chapter 11 of the EIAR address the potential impacts on land drainage. During construction, where drainage outfalls are temporarily altered or land drains blocked or damaged, an adequate drainage outfall will be maintained and land drains will be repaired. During the construction and operational phases of the proposed road development the surface water run-off will be diverted to treatment ponds before discharging and the drainage design is adequate to maintain the existing land drainage. With the implementation of these mitigation measures, the residual impact is not significant to slight adverse.

4.10 Potential impact due to light pollution

Issue

- 4.10.1 7 submissions/objections raise concerns of potential impacts from street lighting and light pollution: Ob_111, Ob_199, Ob_213, Ob_216, Ob_311, Ob_688 and Ob_751.

Response

- 4.10.2 The proposed road lighting is described in Section 5.5.4.4 of Chapter 5, Description of the Proposed Road Development of the EIAR and the lighting type and location including the potential extents of light spill are shown on Figures 5.4.01 to 5.4.15 of the EIAR. There are no national road lighting regulations in relation to agricultural livestock and lighting does not significantly affect the welfare or performance of grazing livestock.
- 4.10.3 In Section 14.4.2 of Chapter 14 of the EIAR, the issue of impact from traffic is addressed where it states that a low level of disturbance will be experienced due to traffic. There are many examples where livestock graze beside busy national roads without significant effects from vehicle lights. Only stimuli that are perceived by livestock to be a threat cause ‘fight or flight’ response – and vehicle lights are not perceived as threats. Landscaping along the boundary of the proposed road development will minimise this potential effect.

4.11 Safety of farming the retained lands

Issue

- 4.11.1 21 submissions/objections raise concerns of the safety of the retained lands: Ob_102, Ob_105, Ob_115, Ob_156, Ob_167, Ob_168, Ob_177, Ob_205, Ob_208, Ob_211, Ob_212, Ob_216, Ob_217, Ob_486, Ob_499, Ob_505, Ob_506, Ob_507, Ob_575, Ob_632 and Ob_750.
- 4.11.2 3 of these also specifically question the safety of the proposed boundary treatment where there is a deep cutting, for example at the N59 Letteragh Junction: Ob_505, Ob_506 and Ob_507.

Response

- 4.11.3 Section 14.4.2 of Chapter 14 of the EIAR acknowledges that there are potential impacts due to the change in the structure and layout of the farm and that permanent disturbance will arise from this. Farmers will have to adjust their practices to ensure that machinery, livestock or objects on the farm do not enter onto the proposed road development and this is part of the overall impact assessed for each farm. There will be changes as to how farmers operate in a particular part of the landholding due to increased angulation of fields or additional risks introduced due to slopes adjoining the proposed road development. The presence of a new road on a farm is a new risk factor to be considered by every affected landowner. The new risks include livestock straying onto the new road, machinery or objects (e.g. round bales) exiting from the land onto the new road or vehicles from the new road entering onto the land. Steep slopes can be created where the proposed road development crosses agricultural land in cut as is the case east of the Letteragh Road where the proposed road development is in a deep cut going through the lands in relation to Ob_461, Ob_272_462, Ob_457, Ob_502, Ob_504, Ob_505 and Ob_506. The land is poor quality and rough and is not frequently traversed with agricultural machinery in land parcels in relation to Ob_505, Ob_506 and Ob_507. Having reviewed the digital topographical data for this area I confirm that the slopes in the land parcels in relation to Ob_505 and Ob_507 adjoining the proposed development boundary are gradual in the retained lands and the risk of anything rolling on to the proposed road development is negligible. In the case of land parcel in relation to Ob_506 there is a moderate slope of approximately 15% on the north side of the proposed road development. This slope runs parallel rather than towards the proposed road development. The risk of anything rolling on to the proposed road development is negligible in this land parcel also. Steep slopes adjoining farm land are part of the natural farming landscape throughout Ireland and this permanent disturbance can be managed effectively by farmers without the requirement for additional safety fencing. The incidence of vehicles entering onto agricultural land is very low due to the high standards of safety on newly designed roads. Therefore, the safety of livestock and farming personnel will not be significantly affected by the proposed road development.

4.12 Loss of agricultural buildings

Issue

- 4.12.1 Three submissions/objections, Ob_216, Ob_259 and Ob_705_625 refer to loss of agricultural buildings.

Response

- 4.12.2 Section 14.5.3 of Chapter 14 of the EIAR addresses the loss of agricultural buildings where it is stated that the landtake will result in the acquisition of farm buildings (mostly small sheds and outhouses) on 17 land parcels,³ including land parcels 259 and 705/625. The impact on these land parcels will be temporary because these facilities can be replaced with new buildings on the retained lands.
- 4.12.3 In relation to Ob_216, the agricultural building/shed will not be demolished - access road AR 4/05 will be located approximately 15m from the shed.
- 4.12.4 Housed livestock are not significantly affected by noise from traffic on nearby roads - in fact many farm yards are located on the side of national roads. Livestock are accustomed to the noise from farm machinery inside and outside of sheds. There are many examples of stables, training tracks and livestock housing, in existence for many years, in very close proximity (i.e. less than 100m) to the existing motorway network (e.g. N7/M7 in County Kildare).

4.13 Boundary Treatments and retention of Stone Walls

Issue

- 4.13.1 15 submissions/objections request further details regarding boundary treatments on their affected land holdings: Ob_145, Ob_213, Ob_238, Ob_246, Ob_272, Ob_311, Ob_468_501, Ob_485, Ob_498, Ob_603, Ob_626, Ob_628, Ob_629, Ob_631 and Ob_684_551.
- 4.13.2 One submission/objection, Ob_751, requests stud rail type fencing.
- 4.13.3 One submission/objection, Ob_226, queries the responsibility of maintaining the proposed boundary of the proposed road development.
- 4.13.4 28 submissions/objections raise concerns over the proposed landscaping and impacts on the retained lands: Ob_102, Ob_105, Ob_115, Ob_117, Ob_156, Ob_167, Ob_168, Ob_177, Ob_197, Ob_199, Ob_205, Ob_208, Ob_211, Ob_212, Ob_217, Ob_239, Ob_468_501, Ob_499, Ob_575, Ob_603, Ob_620, Ob_632, Ob_651, Ob_688, Ob_705_625, Ob_716, Ob_750 and Ob_751.
- 4.13.5 21 submissions/objections object the removal of dry stone walls. It has been suggested that the stone walls are more in keeping with the local character of the affected area and are more effective stock proof boundary and more effective for

³ Ref Nos PRO/MO 117, 154, 229, 243, 259, 289, 495, 498, 572, 583, 625, 626, 632, 691, 689, 701 & 754

livestock shelter: Ob_103, Ob_108, Ob_117, Ob_145, Ob_194, Ob_197, Ob_199, Ob_216, Ob_230, Ob_233, Ob_239, Ob_246, Ob_249, Ob_254, Ob_255_256, Ob_273, Ob_311, Ob_480, Ob_481, Ob_496 and Ob_688.

Response

- 4.13.6 Thomas Burns will address the issues relating to landscaping in his statement of evidence. Eileen McCarthy in her statement of evidence will provide the boundary treatment details. I will respond to the security of the proposed boundary treatment the loss of shelter concerns below.
- 4.13.7 Boundary fencing is necessary to secure the extent of the proposed road development as well as preventing errant persons or wildlife accessing the road network and posing a risk to road users. In accordance with TII standards, and in order to ensure road user safety, stock-proof boundary fencing will be provided as part of the main construction works.
- 4.13.8 The main requirement from an agricultural perspective is to ensure that the boundary of the proposed road development is stock-proof. Post and rail fencing is more effective than stone walls and requires less maintenance and fulfils the requirement for mitigation as set out in Section 14.6 of Chapter 14 of the EIAR which states that “suitable boundary fencing will be erected to delineate the line of the proposed development boundary and prevent disturbance to adjacent land”. Livestock straying onto national primary roads is a very rare occurrence due to the effectiveness of TII boundary fencing along these roads and therefore the proposed post and rail fencing is suitable and fit for purpose.
- 4.13.9 The proposed development boundary will be landscaped as illustrated in Figures 12.1.01 to 12.1.15 of Volume 3 of the EIAR. Section 12.2.5 of the EIAR states that it takes 5 – 7 years post planting for the landscaping to provide effective landscape and visual mitigation and this also indicates the length of time it will take to restore effective shelter for livestock. After this short – medium term loss of shelter the new planting will provide effective shelter in the long term. Therefore, overall impact due to loss of stonewalls is not significant from an agricultural perspective.
- 4.13.10 Where stone walls are removed, the stone will be retained and made available for re-use by landowner for the construction of a new stone wall on their side of the proposed development boundary if they wish.
- 4.13.11 The proposed boundary for the lands in relation to Ob_226, which is located just east of the Cappagh Road, along the mainline of the proposed road development will be maintained by Galway County Council. However the boundary proposed along the access road into the dwelling (and which forms a boundary with property ref 224) will be the responsibility of the landowner.
- 4.13.12 In general, the boundary proposed along the mainline of the proposed road development will be maintained by the local authority whilst the new boundary along the sideroads will be the responsibility of the landowners to maintain.

- 4.13.13 Details of the proposed boundary treatment are addressed by Ms. Eileen McCarthy in her statement of evidence.
- 4.13.14 Because Ob_751 is a stud farm, stud fencing type B (Standard CC-SCD-00322) is proposed for the boundary as shown in Figure 4.1.21 of Appendix A.9.1 of the RFI Response submitted to the Board 30 August 2019.

4.14 Loss of water sources or potential impact on private wells

Issue

- 4.14.1 The potential impact on private wells is mentioned in three submissions/objections, Ob_239, Ob_311 and Ob_496.
- 4.14.2 The potential impacts on natural water sources is raised in five submissions/objections, Ob_115, Ob_117, Ob_505, Ob_507 and Ob_580.

Response

- 4.14.3 Sections 14.5.3 and 14.5.4 of Chapter 14 of the EIAR state that there will be ‘temporary disruption to water supplies’. Section 10.6.2.2.2 of Chapter 10 of the EIAR states that *‘all wells within 150m of the proposed development boundary (or 50m from the calculated drawdown ZoI if greater) will be monitored for water level on a monthly basis for 12 months before construction, during construction and for 12 months after construction. If the monitoring indicates that the proposed road development has impacted on a supply or geothermal well then mitigation will be applied’*. Furthermore, Section 14.6.2 of Chapter 14 of the EIAR states that, if water supplies or sources are affected during the construction period, an alternative water source or supply will be made available e.g. water tanker for livestock or a new bore well. Service ducts will be provided beneath the proposed road development where land is severed. Ground water quality will be maintained by implementing mitigation measures specified in Sections 10.6.2.1 of Chapter 10 and Section 11.6.2 of Chapter 11 of the EIAR; for example, implementing the Sediment Erosion and Pollution Control Plan contained in the CEMP in Appendix A.7.5 of the EIAR. The potential impact on existing water sources is considered in the individual farm assessments in Appendix A.14.1 of the EIAR.

4.15 Potential loss of Security and Privacy

Issue

- 4.15.1 Four submissions/objections raise concerns over the potential loss of security and privacy: Ob_111, Ob_239, Ob_311 and Ob_757.
- 4.15.2 Two submissions/objections refer to the potential for members of the public causing trespass and worry to their horses: Ob_216 and Ob_486.

Response

- 4.15.3 The issue of increased security risk and unsociable behaviour relates to potential instances where there is trespass on to agricultural land by people, dogs and vehicles (which may result in disturbance to livestock, for example). Incidents of disturbance to livestock (due to stray dogs and human trespass) are most likely to occur near urban centres where agricultural land adjoins housing estates. This is an impact that pre-exists the proposed road development. While it is recognised that farmers are very aware and concerned about the security of their farms and property, there are no significant effects from increased security risk adjoining new road developments. The theft of machinery and livestock generally occurs in more rurally isolated areas where there is direct access to land from the public road network. As there will be no direct access from the proposed road development to adjacent lands, the potential impact from increased security risk is not significant. Section 14.6.3 of Chapter 14 of the EIAR shows that this potential impact has been addressed in the EIAR where it states that: *“Other injury impacts such the increased potential for trespass on to private land due to the proposed road development are taken into account in this assessment”*. In Appendix A.14.1 of the EIAR this permanent disturbance impact is assessed for each affected land parcel, including land parcels in relation to Ob_111, Ob_239, Ob_311 and Ob_757, and because it will not have a significant impact on agricultural productivity the impact is not significant.
- 4.15.4 Loss of privacy is an issue raised submissions/objections Ob_311 and Ob_239. I acknowledge that there is loss of privacy in these situations particularly in the case for Ob_239. This land parcel is severed by the proposed road development and the proposed alignment will be elevated relative to the farm yard and within 60m of the existing farm dwelling. The overall impact on this land parcel is profound. However, in this case, the loss of privacy will not have a significant impact on agricultural productivity and in the majority of situations after the establishment of the landscape mitigation along the boundary of the proposed road development privacy will be restored.

4.16 Adequacy of Agricultural Impact Appraisal

Issues

- 4.16.1 Two submissions/objections, Ob_505 and Ob_507 suggest that the agricultural assessment is inadequate.
- 4.16.2 One submission/objection Ob_701 asserts that land usage is described incorrectly.

Response

- 4.16.3 I did not meet with the owner of the lands in corresponding to Ob_505, but Mr Sadlier the equine expert met him. I assessed this holding as medium sensitivity equine enterprise mainly because the land quality in the affected part of the farm is poor and the access to it is via a very narrow lane which restricts its usage for intensive agricultural purposes. Almost 20% of the holding is being taken which is high but the quality of land being acquired is poor. Therefore the resulting impact is moderate adverse.
- 4.16.4 I met with the owner of the lands in corresponding to Ob_507 and assessed this holding as a part of a high sensitivity equine enterprise because the son keeps 20 horses on the entire holding – which also includes outlying land. The quality of land being acquired is poor and only 0.06 hectares or thereabouts at the corner of the farm is being taken and therefore the resulting impact is not significant.
- 4.16.5 I met with the owner of the lands in corresponding to Ob_701 and assessed this holding a high sensitivity beef enterprise because the owner is a cattle dealer and moves high numbers of cattle through this land. The impact is very high due to the loss of greater than 70% of the land and severance of more than 74% of the holding. In addition dwelling, stables and agricultural sheds are being acquired. The resulting impact is very significant adverse.
- 4.16.6 As stated in Section 14.2.2 of Chapter 14 of the EIAR, the agricultural assessment adhered to the EPA guidelines (2002, 2003, Draft, September 2015 and Draft, May 2017) in terms of content and methodology of assessment. Individual farm assessments were made based on a combination of desktop data (land registry boundary data and aerial photography), vantage point surveys and direct engagement with landowners either by phone or by meeting. As stated in Section 14.2.3.1 of Chapter 14 of the EIAR (Technical Limitations), 74% of landowners were engaged with directly by myself (Con Curtin). Where landowners could not be contacted directly, the impacts on land parcels were determined by roadside vantage point surveys, examination of aerial photography and reference to other desk information sources such as land registry mapping, CSO statistics for County Galway and digital soil data and information available in meetings between the landowners and Arup. This is standard practice on many road schemes where landowners cannot, or do not wish to, be contacted. The available data was more than sufficient for the purposes of an agricultural impact appraisal along the alignment of the proposed road development.

- 4.16.7 While the 2010 Agricultural Census data is almost 10 years old it is the most up to date data which gives a break-down of agricultural enterprises on a per county basis – as presented in Table 14.7 of Chapter 14 of the EIAR. The next Agricultural Census will be in 2020. However, the CSO publishes annual figures for livestock numbers and crop areas (which it gets from the Department of Agriculture) and it carries out farm structure surveys every 3 years approximately. The results of these surveys are presented for the Western Region (Galway, Mayo and Roscommon) only, and not on a per county basis. The 2016 CSO Farm Structure Survey⁴ shows very little change between 2010 and 2016 in farm size within the western region where the average size was 24.8 hectares in 2010 and was 24.6 hectares in 2016. The beef and/or sheep and hay/silage enterprise accounted for 82.5% of farmers nationally in 2010 and 96% of farmers within the Western Region in 2010. These percentages remain the same in 2016. The main change in agricultural statistics is for the size of dairy herds. While the number of dairy farmers in the Western Region has not changed significantly the average herd size has increased from approx. 45 cows in 2010 to approx. 61⁵ cows in 2016.
- 4.16.8 Therefore, the enterprise types as presented Table 14.5 of Chapter 14 of the EIAR have not changed significantly and, due to the low number of dairy farms along the proposed road development, the change in dairy herd size is not a significant issue.

⁴ <https://www.cso.ie/en/releasesandpublications/ep/p-fss/farmstructuresurvey2016/da/fs/> - Table 2.2

⁵ Table 4.1 of the 2016 survey <https://www.cso.ie/en/releasesandpublications/ep/p-fss/farmstructuresurvey2016/da/ls/>

4.17 Impacts on Equine Enterprises

Issues

- 4.17.1 Four submissions/objections, Ob_216, Ob_572, Ob_691 and Ob_751 refer specifically to equine issues. My Statement of Evidence addresses the equine assessment in Appendix A14.1. and the specific equine issues are further addressed by Mr. Michael Sadlier in his Statement of Evidence.

Response

- 4.17.2 My assessment of the potential impact on land parcel 216, as shown in Appendix A.14.1 of Volume 4 of the EIAR, is that impact on this beef and equine enterprise due to the proposed road development will be not significant. The magnitude of land loss is low with just 2% of the farm being taken along the edge of the land parcel. The quality of the land taken is poor. Therefore the impact is not significant.
- 4.17.3 My assessment of the potential impact on land parcel 572, as shown in Appendix A.14.1 of Volume 4 of the EIAR, is that impact on this beef and equine enterprise due to the proposed road development will be significant adverse. The impact magnitude is high due to the loss of 37% of the farm and high degree of severance. Therefore the impact is significant adverse.
- 4.17.4 My assessment of the potential impact on property 691 relates only to the agricultural use of the land within the racecourse for sheep grazing and stables. My moderate adverse impact is based on the mainly temporary impact on grazing land and the inconvenience of replacing and moving the stables. Overall the magnitude of impact is low but the sensitivity is very high, recognising its national importance, resulting in a moderate adverse impact.
- 4.17.5 My assessment of impact on land parcel 751, as shown in Appendix A.14.1 of Volume 4 of the EIAR, is that impact on this equine and beef enterprise due to the proposed road development will be profound. The impact magnitude is high due to the loss of 39% of the farm and high degree of severance. The cumulative impact of the N6/M6 is also taken into account and the impact is profound.
- 4.17.6 The impacts on the 46 land parcels with an equine enterprise are detailed on a case by case basis in Appendix A. 14.1 of the EIAR. 37% of land parcels with equines will have residual impacts which are small in scale (i.e. not significant and slight adverse), 24% will have medium scale adverse impacts (i.e. moderate adverse impacts) and 39% will have adverse impacts which are large in scale (i.e. significant adverse, very significant adverse and profound). There is one profound impact (land parcel 751). The relatively high number of large impacts on equine land parcels arises because in the assessment in Appendix A 14.1 of the EIAR, the higher sensitivity of the equine enterprise is recognised. The criteria for assigning sensitivity is shown in Table 14.2 of the EIAR.
- 4.17.7 The impacts from construction disturbance are assessed to be not significant to slight adverse in Section 14.5.3 of the EIAR due to the temporary duration and

because horses and ponies very quickly adapt to construction machinery noises, vibrations and movements. Furthermore, horses will graze land adjoining the proposed road development during the operational phase without any significant adverse effects. The assessment of impact acknowledges that there will be an increased time requirement from landowners during the construction phase to manage and monitor their horses.

- 4.17.8 Good communications between the contractor and landowners is essential to allow landowners to manage their horses during the construction phase. As set out in Section 14.6.2 of Chapter 14 of the EIAR, the contractor is required to employ a key contact person to notify landowners in advance of the commencement of rock breaking or blasting. A veterinary practitioner will be employed for the duration of the construction contract to liaise with landowners to ensure the welfare of livestock is adequately addressed.

5 Conclusion

- 5.1 Having reviewed the issues raised in the submissions/objections submitted to An Board Pleanála and having reviewed my own assessment in light of their comments and concerns I confirm that the assessment of agricultural impacts outlined in Chapter 14 of the EIAR and in Appendix A.14.1 of the EIAR remains unchanged.