11 LANDSCAPE

11.1 INTRODUCTION

1 This chapter describes and analyses the existing landscape character along the route of the proposed development in the Cavan Monaghan Study Area (CMSA) and provides an evaluation of the potential for landscape and visual impacts arising from the proposed development in that study area.

2 Accordingly, this chapter of the Environmental Impact Statement (EIS) identifies and describes the residual landscape impacts which are predicted to occur in the CMSA.

3 A description of the proposed development is set out in Chapter 6, **Volume 3B** of the EIS. That chapter describes the full nature and extent of the proposed development, including elements of the overhead line (OHL) design and the towers. In addition Chapter 6, **Volume 3B** of the EIS provides a factual description, on a section by section basis, of the entire line route. The proposed alignment is described in that chapter using townlands and tower numbers as a guideline. The principal construction works proposed as part of the development are set out in Chapter 7, **Volume 3B** of the EIS.

4 The alignment of the proposed development has been carefully considered so as to avoid and minimise, without being able to remove all, visual and landscape effects. Those effects that remain are the residual unavoidable effects that will occur if planning approval is granted in respect of the proposed development. Accordingly, this chapter does not purport to establish that there are no adverse effects on the appearance or character of the landscape along the alignment of the proposed electricity transmission development in the CMSA.

5 A generalised appraisal has been conducted of the residual unavoidable effects of the proposed development on the landscape in the CMSA, as is appropriate in relation to linear developments. For further details on the evaluation of visual impact on residential properties, refer to the *North-South 400 kV Interconnection Residential Visual Impact Assessment* included as **Appendix 11.2, Volume 3C Appendices**, of the EIS.

6 In summary, this chapter includes the following information:

- Landscape and Visual Impact Assessment Methodology;
- Description of the Characteristics of the Proposed Development;
- Description of the Existing Environment;

- Description of Potential Landscape and Visual Impact;
- Description of Mitigation Measures;
- Description of Residual Landscape and Visual Impact;
- Description of Interrelationships between Environmental Factors; and
- Conclusions.

7 Given its subject matter, this chapter is supported by mapping contained in **Volume 3C Figures** of the EIS as follows:

- Figure 11.1 CMSA Landscape Character Areas;
- Figure 11.2 CMSA Landscape Character Types;
- Figures 11.3 - 11.6 CMSA Landscape Constraints and Photomontage Locations; and
- Figures 11.7 - 11.10 CMSA Zone of Theoretical Visibility and Photomontage Locations.

8 A set of full-scale photomontages and wireframes are contained in **Volume 3C Figures** of the EIS.

9 Site assessments were carried out by two landscape architects as per best practice.

11.2 METHODOLOGY

11.2.1 Scope of the Evaluation

10 This section of the EIS has been prepared in accordance with relevant EU and Irish Legislation and guidance, including the requirements of Annex IV of the EIA Directive and in accordance with Schedule 6 of the *Planning and Development Regulations 2001* (as amended) and conforms to the relevant requirements as specified therein. The scope of the evaluation is based on a review of legislation, guidance documents, other EISs, feedback from public consultation, consultation with prescribed authorities, including An Bord Pleanála (the Board), and a consideration of the likelihood for significant impacts arising, having regard to the nature of the receiving environment and the nature and extent of the proposed development.

11 The scoping opinion received from the Board (see Appendix 1.3, **Volume 3B** of the EIS) identified the following issues as being relevant to this chapter of the EIS, each of which are dealt with in this chapter or elsewhere in the EIS as noted below:

- Include full-scaled photomontages (these are included in **Volume 3C Figures** of the EIS);
- Provide an overview of landscape character having regard to the Landscape Character Assessments which inform statutory development plans;
- Identify the area of visual influence;
- Appraise impacts on landscape character and visual amenities having particular regard to designated landscapes, views of amenity value, including protected views, and the setting of main tourism assets;
- Identify and appraise potential impacts on historic demesne landscapes;
- Appraise potential for alternative routing or partial undergrounding in sensitive landscape areas (This is included in Chapter 5 , **Volume 3B** of the EIS); and
- Appraise cumulative visual and landscape impact assessment with the 110 kV and 220 kV OHL network and other existing and permitted development. (This is included in Chapter 10, **Volume 3B** of this EIS.)

12 Scoping submissions were also received from Monaghan County Council, Cavan County Council, Fáilte Ireland, An Taisce and the Department of the Environment, (Northern Ireland) and have been taken into account in this appraisal.

13 An outline of the OHL route selection methodology, including mitigation by avoidance, is described in detail in Chapter 5, **Volume 3B,** of the EIS. The *Final Re-Evaluation Report* (April 2013) (see Appendix 1.1, **Volume 3B Appendices** of the EIS), also provides full details of how the preferred route corridor and indicative line route was selected, including reference to the potential for landscape and visual impacts.

14 The *Preferred Project Solution Report* (July 2013) (see Appendix 1.3, **Volume 3B Appendices** of this EIS), outlines the process of moving from an indicative line route, as identified in the *Final Re-evaluation Report* (April 2013), to a more detailed preferred line design.

11.2.2 Guidelines

15 The key guidelines used in this appraisal are the *Advice Notes on Current Practice in the preparation of EIS*, Environmental Protection Agency's (EPA) (2003) and the *Guidelines for Landscape and Visual Impact Assessment*, 3rd edition, Landscape Institute and Institute of Environmental Management and Assessment (2013). A full reference list of guidelines and

documents is contained in the **Bibliography** in this volume of the EIS and Table 11.1, **Appendix 11.1, Volume 3C Appendices** of the EIS.

11.2.3 Evaluation Area for the EIS

16 The size of the evaluation area is based on conclusions from the *Final Re-Evaluation Report* (April 2013) and a professional judgement on the nature of visibility over long distances. The approach to identifying the size of the study area for the purposes of this EIS is as follows:

- 5km either side of alignment for general evaluation; and
- Extension to 10km either side of the alignment for designated panoramic scenic views that are at a higher elevation than the alignment.

11.2.4 Desktop Study and Site Survey

17 A desktop study was initially carried out to identify the landscape sensitivities within the CMSA as described in the relevant county development plans and county landscape character assessments.

18 Data available from the Irish Trails Office, Discover Ireland, Fáilte Ireland and the historic garden survey as described in the National Inventory of Architectural Heritage (NIAH) was taken into account, providing information about tourist attractions and various driving, walking and cycling routes.

19 Site visits to public locations were carried out to confirm the nature and extent of the key desktop identified landscape constraints and to ascertain the general characteristics of the landscape through which the proposed line route passes. Site visits also determined the most appropriate locations for photographs on which to base photomontages.

20 As part of the consultation process, Monaghan and Cavan County Councils requested photomontages from specific locations.

11.2.5 Definitions of Terms Used in This Chapter

21 Landscape effects are defined as the result of physical changes to the fabric of the landscape resulting from new development. Such physical changes may include the addition, alteration or removal of structures or vegetation. Landscape effects can be temporary and include those caused by temporary access routes, working areas, storage yard and construction traffic. Landscape effects may be positive (beneficial), negative (adverse) or neutral (no overall change

or a balance of positive and negative effects). Landscape effects were evaluated on the basis of:

- The capacity of the existing landscape to absorb the proposed development;
- Effects on landscape character and physical features;
- Proximity of sensitive viewpoints (e.g. scenic routes) and visual receptors; and
- The heights and locations of the typical towers in relation to existing landscape scale.

22 Visual effects are closely related to landscape effects, but concern changes in views. Visual assessment concerns people's perception and response to visual amenity. Effects may result from new elements located in the landscape that cause visual intrusion (i.e. interference with or interruption of the view). Visual effects may be positive (beneficial), negative (adverse) or neutral (no overall change or a balance of positive and negative effects). Visual effects were evaluated taking account of:

- The sensitivity of the receiving environment;
- The visual contrast between the existing environment and the proposed development; and
- The extent of the areas over which these effects will be discernible.

23 A full set of definitions and criteria for assessment (including landscape value, capacity, sensitivity, magnitude of change and significance of effects) is contained in Tables 11.2 - 11.10 **Appendix 11.1, Volume 3C Appendices** of the EIS**.**

24 For the purposes of this evaluation, landscape and visual effects resulting from the introduction of an overhead electricity transmission line will normally be considered to be of an adverse nature. The sensitivity of the landscape, the magnitude of change proposed and resulting significance of effects will be evaluated in this chapter.

11.2.6 Landscape Units

25 For the purposes of this appraisal, and for ease of description, the study area is divided into landscape units as illustrated in **Figure 11.1**.

26 These units are based on landscape character areas described in the *Monaghan County Landscape Character Assessment 2008* and the *Cavan County Development Plan 2014 – 2020.*

27 Landscape character changes gradually over the geography of the study area, and therefore the landscape units are a guide to general landscape character in any particular area.

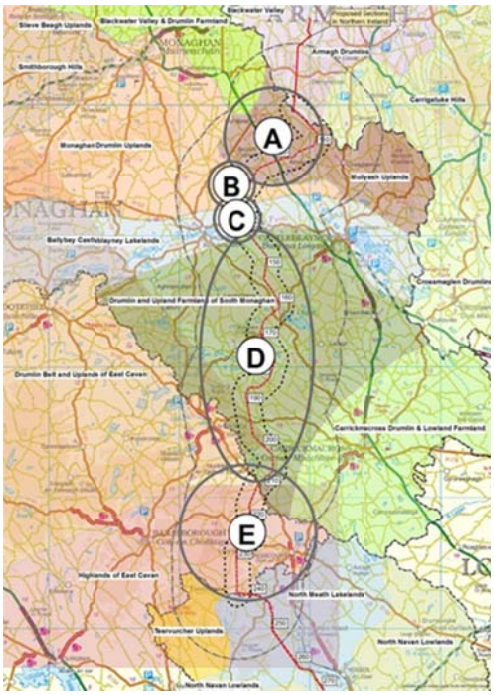


Figure 11.1: Landscape Units

Table 11.1: Cross-Referencing Between Towers, Landscape Units, Photomontages and Figures

Towers	Landscape Character Area	Landscape Unit	Photomontage	Figure
Tower 103 to128	Mullyash Uplands	A[36]	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	11.3
Tower 129 to 136	Monaghan Drumlin Uplands	B	11, 12	11.3 11.4
Tower 137 to 142	Ballybay Castleblayney Lakelands	C	13, 14, 15, 16, 17	11.3 11.4
Tower 143 to 211	Drumlin and Upland Farmland of South Monaghan	D	18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 34, 35, 36	11.4 11.5
Tower 212 to 239	Highlands of East Cavan	E	33, 37, 38, 39, 40, 41, 42	11.6

[36] Note that Landscape Units E-M relating to the Meath Study Area (MSA) of the overall proposed development are addressed in **Chapter 11, Volume 3D** of this EIS.

11.2.7 ZTV (Zone of Theoretical Visibility) Mapping

28 Mapping the extent of the area from which a development is likely to be visible has many names, which is symptomatic of its limitations. Originally known as a Visual Envelope Map (VEM), then as a Zone of Visual Influence (ZVI), and more recently as a Zone of Theoretical Visibility (ZTV), these changes in terminology reflect attempts to address frequent challenges occasioned by the mapping. Therefore, as a theoretical methodology, ZTV prediction does not take into account the effects of seasons, lighting, weather conditions or visibility over distance. Moreover, a ZTV does not take account of the screening effects of vegetation or buildings and can omit topographical variations of up to 10m. Thus, in reality, ZTV mapping's principal use is to identify viewing points for further analysis.

29 ZTV mapping has been prepared for this proposed development (Figures 11.7 - 11.10, **Volume 3C Figures** of the EIS). This was generated using the latest version of Key TERRA-FIRMA and AutoCAD software packages. This mapping indicates areas from where the proposed development is theoretically visible. It is important to note that the mapping does not indicate areas from which the proposed development will be *actually* visible. The ZTV mapping should therefore be used in conjunction with photomontages in order to ascertain the difference between "theoretical and actual visibility".

11.2.8 Photomontage Locations

30 The Landscape Institute (UK) in its *Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment* published in 2011, on the subject states; "*The landscape professional should select a set of photographic viewpoints which are considered representative of the range of likely effects, viewing experiences and viewpoints ensuring that none are under or over represented."*

31 It is possible to prepare detailed and highly realistic images that illustrate the likely future appearance of a development from a specific viewing point. These are useful for examining the effects from a limited number of critical viewpoint positions. However, they contribute little to an appraisal of the effects on the overall landscape within which an almost infinite number of potential viewpoints exist. There is no meaningful way to illustrate every view within a landscape. Instead, a representative sample of 'worst case' views are provided. These include views from elevated areas, in very open landscape, where the alignment crosses higher ground, or at close distances. Many other locations within the study area will not experience any landscape or visual effects as a result of the proposed development.

32 Other photomontage locations are selected to illustrate the nature of visibility in the wider landscape. As the views are representative of viewing conditions that are encountered, some

of them may show vegetation, buildings or topography partially screening the proposed development. Such conditions are normal and representative.

33 A significant limitation of visualisations is that the visual prominence of features in the landscape is significantly affected by lighting conditions and weather. Thus, for example, all views will appear different in various conditions of lighting, haze, weather and seasons. The views provided in **Volume 3C Figures** of the EIS and shown at a smaller scales in this chapter of the EIS, are representative but not comprehensive because in addition to there being an almost infinite number of viewpoints, there are a very large set of combinations and permutations of lighting conditions that could conceivably occur for every view. The Landscape Institute (UK) Guidelines (2011) in its Advice Note 01/11 *Photography and Photomontage in Landscape and Visual Impact Assessment* published in 2011, on the subject states; *"they (photomontages) are subject to the same inherent limitations as photographs, for example only showing the scene as it would appear under the same conditions that prevailed when the original photograph was captured."*

34 Therefore, at best, visualisations can represent a view from a particular location at a particular time in particular weather conditions. There is no such thing as a fixed or single impact on the appearance or character of the landscape.

35 Photomontages do not show the effects of temporary hedgerow removal at construction stage, as this will be reinstated. The more permanent localised trimming or removal of taller vegetation within falling distance of any part of any OHL support or conductor is also not indicated.

36 The most effective use of photomontages is to view them in the field. The Landscape Institute (UK) in its Advice Note 01/11 *Photography and Photomontage in Landscape and Visual Impact Assessments* published in 2011, states *"It is essential to recognise that two-dimensional photographic images and photomontages alone cannot capture or reflect the complexity underlying the visual experience, and should therefore be considered an approximation of the three-dimensional visual experiences that an observer would receive in the field."*

37 A full-scale set of photomontages, with technical details, are contained in **Volume 3C Figures** of the EIS**.** The detailed location and context of photomontage views are indicated on the mapping in Figures 11.3 – 11.6, **Volume 3C Figures** of the EIS. All photomontage locations are publicly accessible.

Table 11.2: Full Set of Photomontages

Photomontage number	Direction of View
1[37]	View southeast from the junction of local roads L3530 / L33101 & L7510 northeast of the 'Battle of Clontibret' site in the townland of Crossaghy
2	View southeast from local road L7502 in the townland of Coolartragh
3	View southwest from Crossbane Road in the townland of Crossbane, Northern Ireland
4	View southeast from local road L7511 across the townland of Tassan, located approximately 3km southeast of Clontibret
5	View west, southwest from local road L7503 in the townland of Lisdrumgormly
6	View west from local road L7631 (Scenic Road SV12) west of the Mullyash Mountains
7	View north, northeast from local road (former N2) in the townland of Cashel at junction with L7422
8	View northwest along the N2 - Castleblayney Bypass in the townland of Annagh (ED Cremorne By)
9	View southeast along the N2 - Castleblayney Bypass from a lay-by in the townland of Carrickanure
10	View east from local road L3420 across the townland of Cornamucklagh North, located approximately 4km south of Clontibret
11	View north, northeast from local road L7411 at a junction with an access track, across the townland of Drumroosk, passing Clarderry and Derryhallagh (Monaghan By), located approximately 3.5km northwest of Doohamlet
12	View west, southwest from local road L7411 in the townland of Drumroosk approximately 2.5km northwest of Doohamlet
13	View northwest from N2 Castleblayney Bypass roundabout in the townland of Lislanly
14	View southwest from local road L3700 (Scenic Road SV15) in the townland of Annyart - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 139 and 147)*
15	View west from local road L3430 on the outskirts of Doohamlet - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 139 and 147)*
16	View northeast from R183 at the junction with local road L7200 in the townland of Ballintra - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 139 and 147)*
17	View southeast across Lough Major from car park along a local access road situated along the northern edge of the lake, south of the R183 - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 139 and 147)*
18	View east from local road L3200 across the townland of Clogher, located approximately 4.5km southeast of Ballybay - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 139 and 147)*
19	View west, northwest from local road L4221 (Scenic Road SV21) in the townland of

[37] Note that Photomontages 41-77 relating to the Meath Study Area (MSA) of the overall proposed development are addressed in **Chapter 11, Volume 3D** of this EIS.

Photomontage number	Direction of View
	Lattonfasky partially overlooking Lough Egish - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 160 and 169)*
20	View north from R180 north of the townland of Brackly (Cremorne By)
21	View east, southeast from Junction R180 / L4210 across the townland of Greagh (Cremorne By) and Tullynahinnera – *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between towers 160 and 169)*
22	View south, southeast from local road L4210 across the townland of Lough Morne, located approximately 7km southeast of Ballybay - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 160 and 169)*
23	View southeast from local hill (Waterworks Reservoir) in the townland of Kilkit - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 160 and 169)*
24	View south from local road L7113 across Lough Morne - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 160 and 169)*
25	View southwest from R181 at the entrance of a graveyard in the vicinity of Aghmakerr townland - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 160 and 169). Please note also that names on gravestones have been blurred in order to preserve the anonymity of the grave.*
26	View south, southeast from local road L40431 (Scenic Route SV 22) located in the townland of Tooa, located approximately 7km northeast of Shercock
27	View southeast from local road L40431 (Scenic Viewpoint 22) in the townland of Tullyglass
28	View east, southeast from Ouvry Cross Roads, located approximately 3.5km northeast of Shercock
29	View north, northwest from local road L4031 at the northern boundary of Corduff, located approximately 5.5km northeast of Shercock
30	View west, southwest from R178 at road junction with local road L4020 in the townland of Corvally (Farney By) - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 196 and 203)*
31	View east from R178 approximately 2.5km east of Shercock, en Route to Carrickmacross - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 196 and 203)*
32	View southwest from local road L49051 across the townland of Raferagh, located approximately 4.5km east of Shercock - *Please note this photomontage includes bird flight diverters attached to both earthwires (Section between Towers 196 and 203)*
33	View southeast from R162 at the cross roads with L7554 and L7553 in the townland of Taghart North or Closnabraddan
34	View north, northwest from local road L49033 in the vicinity of Lavagilduff townland, located approximately 6km southeast of Shercock and east of the R162
35	View northwest from R162 at cross roads with local road L8920 between the townland of Drumiller and Lavagilduff
36	View northwest from R162 at elevated ground between the townland of Tullybrick and Drumbrackan
37	View northwest from R165 at junction with local road L3526, northwest and outside of Kingscourt
38	View northwest from R165 at junction with local road L3532 in the townland of

Photomontage number	Direction of View
	Cornaman, east of Muff Lough
39	View west from local road L7567 near the site of the Fair of Muff
40	View southeast from local road L3531 southeast in the townland of Moyer
41	View east from picnic area beside local road L7567 near scenic view point (SV8) Lough an Leagh Gap
42	View east from local road L3533 in the townland of Drumbar (ED Enniskeen) east of Moyhill Bridge

11.3 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

38 It is proposed to introduce large structures into the rural landscape along the length of the line route. These structures are similar in design to other existing high voltage electricity infrastructure in Ireland. The towers and associated infrastructure have the potential to impact on landscape character and visual amenity, particularly where the following factors occur:

- A large number of towers are visible from a single viewing point;
- The OHL crosses or is in close proximity to a scenic route;
- The OHL crosses a national or regional road;
- The OHL is visible along a wide expanse of open countryside of a dominantly natural character;
- The OHL crosses a skyline ridge;
- The OHL is in close proximity to a river or lake at a point where there is visibility from public roads; or
- The OHL crosses a visually conspicuous upland area.

11.4 EXISTING ENVIRONMENT

11.4.1 Landscape Context and Character

39 The study area for this appraisal forms part of the extensive farmed drumlin belt which stretches east-west across the island of Ireland. The long history of human habitation and agriculture is reflected in a complex pattern of hedgerows and fields which form part of the story of human influence in counties Monaghan and Cavan which also includes widespread rural housing development, farm and commercial buildings, a dense road network and existing utilities infrastructure. Main roads including the N2, R162, R180, R178 and R165 and local roads tend to follow the lower parts of the landscape and travel in a north-west–south-east direction

following the general orientation of the varying sized bands of drumlins. Other regional roads also form part of the transport network linking the main towns of Castleblayney, Carrickmacross, Kingscourt, Ballybay and Shercock. The area includes some uplands which tend to be more sparsely populated and have in some areas been planted with commercial forestry. Low-lying areas tend to be poorly drained and often contain scrub vegetation and lakes. Buildings tend to be located in the lower parts of drumlins and along roads where views are more enclosed. Expansive views over rolling topography are possible from the higher parts of drumlins. The southern part of Monaghan is more open and exposed with a less hilly and more rolling landform. The part of County Cavan within the study area forms part of this rolling landform and further west is defined by the rising ground of Cornassaus which commands expansive panoramic views. The characteristic landscape features of the study area are the ridgelines and pattern of drumlins, the views from elevated areas and the lakes which occur in the lower lying areas.

11.4.1.1 Monaghan Landscape Character Assessment (MLCA) and Cavan Landscape Categorisation

40 The MLCA was adopted in June 2008 as a variation to the *Monaghan CDP 2013-2019* and subsequently incorporated into the current plan covering 2013-2019. The MLCA provides a description of the landscapes in County Monaghan.

41 A table summarising the general recommendations of the Monaghan County Landscape Character Assessment is contained in Tables 11.11 and 11.12, **Appendix 11.1, Volume 3C Appendices** of the EIS.

42 The Cavan CDP 2014 - 2020 has undertaken a categorisation of Cavan's landscape, but the identified categories may form part of a future landscape character assessment. The categories have been chosen due to their physical characteristics and geomorphological features which make them distinctive in the County. The categories subdivide Cavan's landscapes into 5 Character Areas. The line route passes through Area 5 - *East Cavan Highlands*.

43 The county level assessment carried out by Monaghan and Cavan County Councils provides guidance to the more project-specific landscape assessment set out in this chapter. A *Draft National Landscape Strategy for Ireland 2014-2024* was issued by the Department of Arts, Heritage and the Gaeltacht for consultation in July 2014. The implementation of the current draft strategy would include a new National Landscape Character Map and new statutory guidelines on local Landscape Character Assessment.

44 The location of the proposed development in relation to landscape character areas and types as set out in the Cavan and Monaghan CDP's is indicated in Figures 11.1 and 11.2, **Volume 3C Figures** of the EIS.

11.4.2 Landscape Value

45 The criteria for the assessment of landscape value are set out in Table 11.2–11.10, **Appendix 11.1, Volume 3C Appendices** of the EIS**.** The factors that feed into a determination of landscape value are set out below, as well as in **Section 11.4.3** which describes the landscape value of each unit.-

46 The MLCA has recognised particular parts of the landscape as being of significant value – particularly the Mullyash Uplands and Ballybay Castleblayney Lakelands. The Cavan CDPs, past and present, have recognised the uplands of Cornassaus as being of value. Designated scenic views, amenity areas and walking routes are also recognised as being of value. Other recreation routes are promoted by the Irish Trails Office and a series of historic designed landscapes have been recorded in the NIAH.

11.4.2.1 Monaghan County Development Plan 2013-2019

47 It is Monaghan Council Council's policy that any new developments should have regard to the Landscape Character Assessment of 2008 (LCA). Policy LPP 1 of the Monaghan CDP 2013-2019 aims to *"ensure the preservation and uniqueness of the county's landscape by having regard to the character, value and sensitivity of landscape as identified in the County Monaghan Landscape Character Assessment."*

11.4.2.2 Areas of Primary and Secondary Amenity

48 The Monaghan CDP recognises areas of *Primary and Secondary Amenity Value* and identifies views from scenic routes. The majority of these views are associated with views of lakes or views from upland areas. These are indicated in Figures 11.3 - 11.6, **Volume 3C Figures** of the EIS and listed in Table 11.13, **Appendix 11.1, Volume 3C Appendices** of the EIS**.**

49 The closest *Area of Primary Amenity Value* to the proposed development is Lough Muckno and Environs, which is located approximately 6.6km to the east of the line route.

50 The closest *Area of Secondary Amenity Value* to the proposed development is Lough Major and Environs, which is located approximately 2.3km to the west of the line route.

11.4.2.3 Views from Scenic Routes

51 The closest recognised scenic views to the proposed development are SV22 (at a distance of approximately 0.7km) and SV21 (at a distance of approximately 1.9km). A full list of scenic views in the study area is provided in Table 11.14, **Appendix 11.1, Volume 3C Appendices** of the EIS and their locations are shown on Figures 11.3 - 11.6, **Volume 3C Figures** of the EIS**.**

11.4.2.4 Cavan County Development Plan 2014 - 2020

52 The landscape features recognised by the Cavan CDP are listed in Table 11.15, **Appendix 11.1**, **Volume 3C Appendices** of the EIS and their locations are shown on Figures 11.3-11.6, **Volume 3C Figures** of the EIS.

53 The closest designated landscape features to the proposed development are Lough an Leagh Mountain located approximately 2.1km and Dun a Rí Forest Park located approximately 3.8km from the proposed development.

11.4.2.5 Key Waymarked Paths

54 The Monaghan Way is a waymarked walking route (of approximately 64km length) that runs from Monaghan Town in the north-east of the county to Inniskeen in the south-east. It passes through many different landscapes and is of local and regional amenity. It runs parallel to the proposed line route for approximately 2km at a distance of between 0 – 400m and crosses the alignment once. The Monaghan Way is considered the main tourism asset in the vicinity of the proposed development.

11.4.2.6 Historic Designed Landscapes

55 A number of Historic Designed Landscapes listed within the NIAH fall within the 5km of the proposed line route. These are set out in Table 11.16, **Appendix 11.1, Volume 3C Appendices** of the EIS along with a description of their condition. Their locations are shown on Figures 11.3 - 11.6, **Volume 3C Figures** of the EIS.

56 The closest historic designed landscapes to the line route with *"main features substantially present"* are Shantonagh House (which the line route crosses), Lakelands at a distance of approximately 1.4km and Ballybay House at a distance of approximately 1.8km.

11.4.2.7 Natural Heritage Areas and Areas of Special Scientific Interest

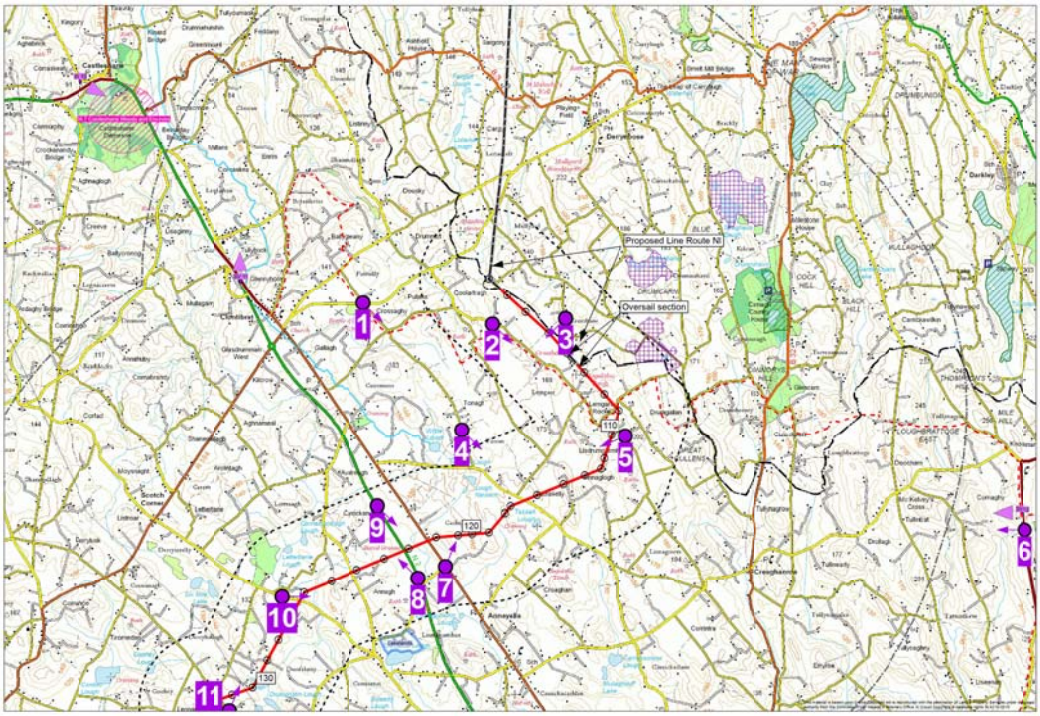
57 While Natural Heritage Areas (NHA) and Area of Special Scientific Interest (ASSI) designations relate to ecological importance, their amenity potential is a factor in warranting evaluation in terms of visual and landscape effects (refer to **Chapter 6** of this volume of the EIS). The

ecological designations within 5km of the proposed development are listed in Table 11.17 **Appendix 11.1, Volume 3C Appendices** of the EIS and their locations indicated on Figures 11.3 - 11.6, **Volume 3C Figures** of the EIS.

58 The closest are Tassan Lough which is located approximately 0.3km from the line, Lough Egish pNHA located approximately 0.6km, and Cordoo Lough located approximately 1.3km from the line.

11.4.3 Detailed Description of the Landscape Units

11.4.3.1 Detailed Description of Landscape Unit A – Mullyash Uplands (refer to Table 11.1)



View 1 from the L3530 at 'Battle of Clontibret' site

View 2 from the L7502 at Coolartragh

View 3 from Crossbane Road, Armagh

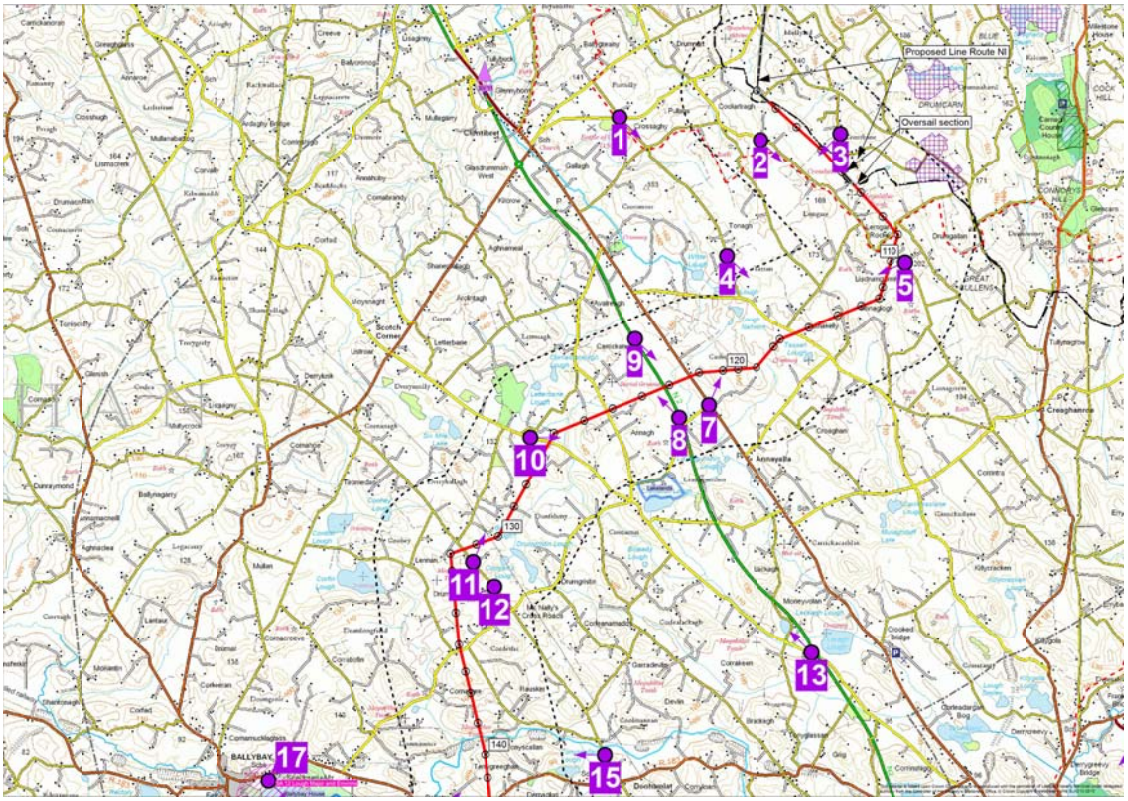
View 5 from the L7503 at Lisdrumgormly

View 8 along the N2 at Annagh (Cremorne By)

View 10 from L3420 at Cornamucklagh North

Description		
This unit falls within the North Monaghan Drumlin Belt. It is a highly varied landscape of small hedge enclosed fields draped over small drumlins. The lands rise to a flatter plateau as one moves north. This is an inhabited, man-altered landscape that contains many small farm holdings and associated roads, sheds, phone and powerlines. There is a pronounced north-west to south-east diagonal pattern to roads, following the orientation of the underlying glacial deposits.		
Value – Moderate / High	**Capacity – Low / Moderate**	**Sensitivity – Moderate / high**
Mullyash Mountain, an *Area of Secondary Amenity Value*, lies within this Landscape Unit; approximately 6.4km from the line route. There are a number of scenic viewpoints within this unit; SV12, SV13 and SV14 are located approximately 6 - 7.5km to the east of the line route on the slopes of Mullyash. SV11 is a view northwards at Tullybrack approximately 3.2km from the line route. The Monaghan Way is broadly parallel to the route at between 0 to approximately 400m for approximately 2km and passes under the proposed development at Lemgare Rocks. This unit contains the site of the Battle of Clontibret, a nationally significant historic site that lies approximately 1.2km east of the eponymous village.	While some visual enclosure is provided by the drumlin landscape, any towers on the upper parts of drumlins have the potential to be more visible. The plateau landscape creates opportunities for views out from the edge of the landform over the lower lying landscape to the south. The nature of the plateau topography also limits long range views when the viewer is away from the slopes. The more scenic areas on the eastern side of Mullyash Mountain have been avoided; however, the upland nature of parts of the landscape means that the capacity of the landscape to absorb a development such as a transmission line is low/ moderate. The character of the landscape is more built up as one moves south towards the N2, and there is more capacity in these locations to absorb new development. The alignment crosses the N2 approximately 2km north of the small settlement at Annayalla at an open part of the landscape.	The Mullyash Uplands wider Landscape Character Area is assigned a high sensitivity in the MLCA. This includes the area of Mullyash to the east as well as the drumlin and upland flat areas through which the line route passes. Due to the potential for open visibility, the edges of the plateau like areas would be more sensitive to development. The small valley in the northern most part of this study area is most visible in views from the north-east and part of the Monaghan Way. The scale and enclosure of this landscape feature would render it sensitive to new development. As the line route is located away from the key sensitive area around Mullyash Mountain, the sensitivity of the part of the landscape through which the proposed line route passes is considered moderate / high.

11.4.3.2 Detailed Description of Landscape Unit B – Monaghan Drumlin Uplands (refer to Table 11.1)



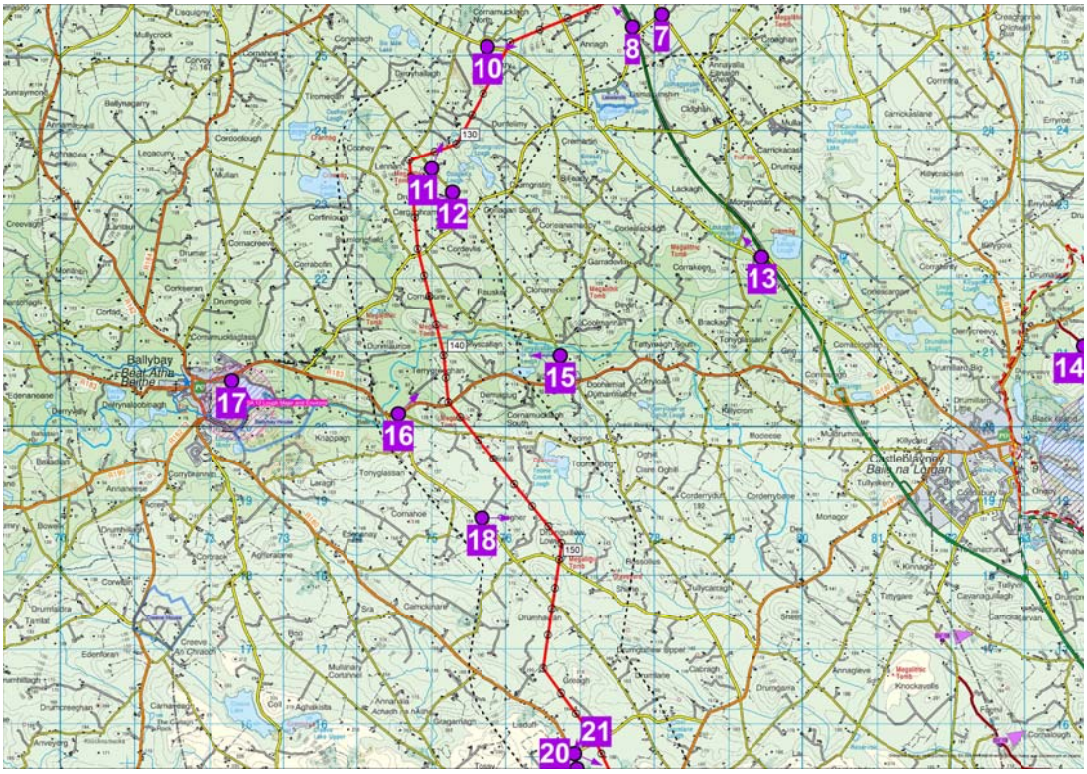
View 10, from the L3420 at Cornamucklagh North

View 11, across the townlands of Dunfelimy and Clarderry

View 12, across Drumroosk townland

Description		
This unit falls within the North Monaghan Drumlin Belt. It is a landscape of small hedgerow enclosed fields draped over small drumlins and a number of small lakes which are located in the vicinity of the line route. This is an inhabited, man-altered landscape that contains small farm holdings and associated roads, sheds and existing 110 kV transmission line.		
Value - Moderate	**Capacity – Moderate**	**Sensitivity – Moderate**
The landscape includes elevated upland drumlin areas and lowland loughs interspersed with marshland and pasture farmland. A pNHA is located at Cordoo Lough to the west of the line route. This Landscape Unit contains a Scenic Viewpoint, SV9, located approximately 9.2km from the line route and looking to the north-east, and away from the proposed development.	The upper parts of drumlins have less capacity to absorb the visual effects of a transmission line than the lower parts. The undulating nature of the landscape generally restricts the possibility for long distance views, except for where elevated viewpoints are possible.	There are local variations in sensitivity, primarily dependent on proximity to lakes and elevation. The open character of the landscape in some areas would result in potential wider visibility of towers, and these areas are more sensitive than areas enclosed by topography.

11.4.3.3 Detailed Description of Landscape Unit C – Ballybay Castleblayney Lakelands (refer to Table 11.1)



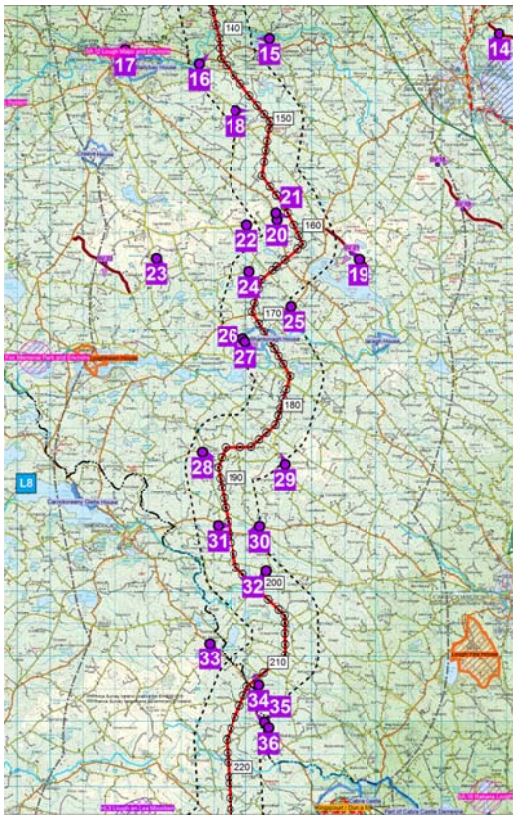
View 15 from the L3430 on the outskirts of Doohamlet

View 16 from the R183 in the townland of Ballintra

View 17 from Lough Major, Ballybay

Description		
This man-altered landscape is defined by undulating drumlin pasture with some relatively low lying areas to the east and west of the proposed development. The village of Doohamlet is located within 2km of the line route. The drumlins in this unit are more pronounced which create highly enclosed landscapes. More open views are possible from elevated parts of the landscape such as at Cornahoe, although roads tend to follow the lower parts.		
Value - Moderate	**Capacity – Moderate**	**Sensitivity - Moderate**
While falling within the Ballybay Castleblayney Lakelands LCA, this part of the line route is relatively far from any of the major lakes such as Lough Muckno, located approximately 6km to the east or Ballybay lake 3km to the west. There are, however, a number of smaller lakes in the immediate vicinity of the line route, the closest being Tonyscallan or Dernaglug Lough close to Doohamlet, located approximately 1km to the east of the line route. Views from lake environs are important and recognised as such in the MLCA.	The upper parts of drumlins have less capacity to absorb the visual effects of a transmission line than the lower parts. The undulating nature of the landscape generally restricts the possibility for long distance views, except for where elevated viewpoints are possible.	Views from the environs of lakes are sensitive as are views from and towards the more elevated parts of drumlins. Views from Doohamlet into the wider landscape are sensitive as well as the context of Tonyscallan or Dernaglug Lough. The R183 runs perpendicular to the line route.

11.4.3.4 Detailed Description of Landscape Unit D – Drumlin and Upland Farmland of South Monaghan (refer to Table 11.1)



View 18 from the L3200 at Clogher

View 20 from the R180 at Brackly (Cremorne By)

View 21 from junction R180 / L4210 at Greagh (Cremorne By) and Tullynahinnera

View 24 from L7113 across Lough Morne

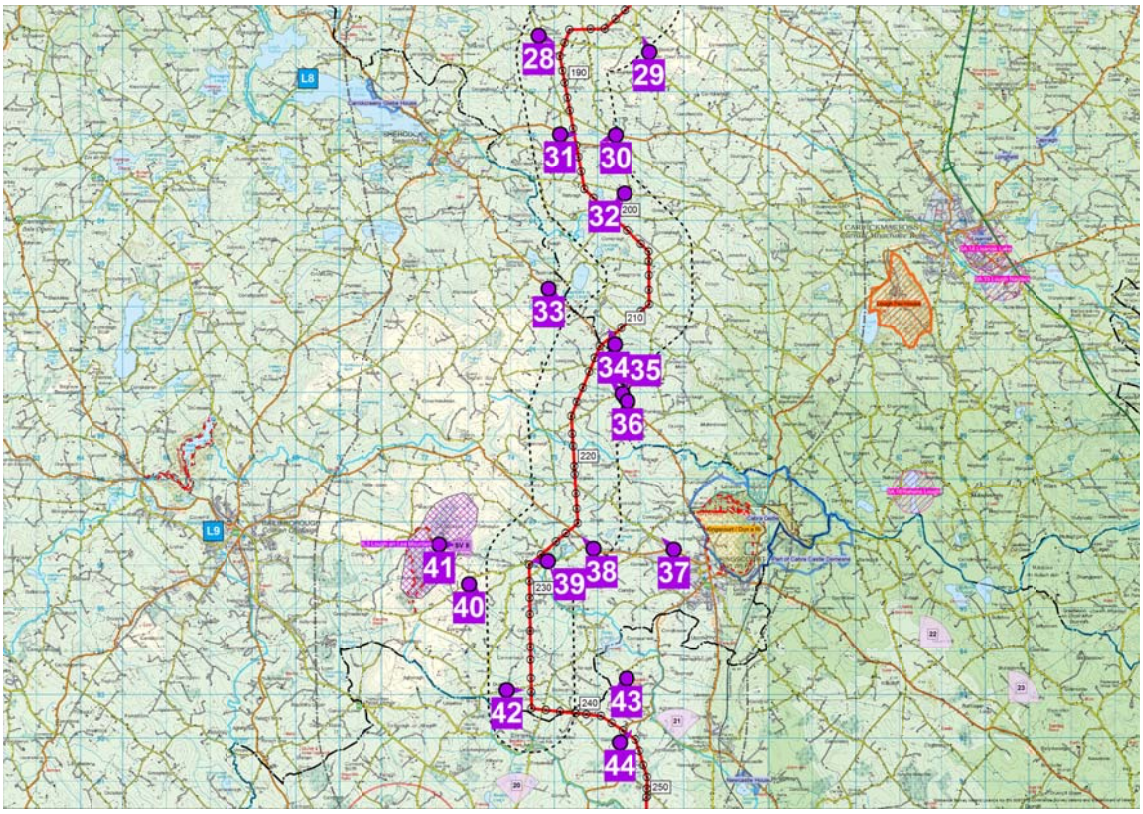
View 26 from the L40431(Scenic Route) at Tooa

View 28 from Ouvry Cross Roads

View 31 from the R178, 2.5km east of Shercock

Description This man-altered landscape extends from Castleblayney to the border with Cavan. The northern part of this landscape unit consists of broad shallow valleys which are more open than the more enclosed and complex landscape created by the larger than average drumlins and lakes further south in the unit. Three regional roads are crossed perpendicularly (R178, R180 and R181).		
Value/Value – Moderate	**Capacity – Moderate**	**Sensitivity - Moderate**
The landscape pattern of broad valleys and extensive areas of larger than average drumlins, with a strong hedgerow network includes roads, houses and existing electricity lines. There are a number of scenic viewpoints within this Landscape Unit, SV21 – a distance of 1.9km (view of Lough Egish looking in the direction of the line route) and SV22 at a distance of 0.7km (a view from a scenic drive at Beagh, Shantonagh and Corlat). SV23 is a view towards Lough Bawn and County Cavan in the direction of the proposed development at a distance of approximately 3.8km. Lough Egish which lies to the south of the unit is an important scenic, ecological and historic resource in the county.	The upper parts of drumlins have less capacity to absorb the visual effects of a transmission line than the lower parts. The undulating nature of the landscape generally restricts the possibility for long distance views, except for where elevated viewpoints are possible. The drumlins and vegetation become more dense east of Shercock with curtailed long distance visibility.	The most sensitive areas are the locations on the upper parts of drumlins which afford views over the landscape and the vicinity of lakes. Vegetation in many areas provides screening over distances. There are a number of small lakes within 1km of the line route and the setting of these lakes is sensitive to change.

11.4.3.5 Detailed Description of Landscape Unit E – Highlands of East Cavan (refer to Table 11.1)



View 35 from cross roads R162 / L8920 at Drumiller

View 37 from junction R165 / L3526 outside of Kingscourt

View 39 from L7567 near the site of the Fair of Muff

View 41 from Lough an Leagh Gap

View 42 from the L3533 at Drumbar (Eniskeen By)

Description

This unit includes two distinct landscape types - the low lying drumlins of the most eastern part of Cavan and the uplands of Lough an Leagh Mountain. Views tend to be enclosed within the drumlin landscape, but any elevated positions provide panoramic views. Both the lowlands and the mountain are man-altered and contain agricultural patterns, a network of roads, houses and telecommunications and electricity infrastructure.

Value – Moderate / High	**Capacity – Moderate**	**Sensitivity – Moderate/high**
This unit includes the environs of Kingscourt and Lough an Leagh Mountain. The line route passes to the east of an area of designated landscape sensitivity in the current Cavan CDP. This man-made landscape contains an existing 220 kV line and more dense suburban type development closer to outskirts of Kingscourt. A protected viewpoint, SV8, is located 2.1km to the north at Lough an Leagh Gap which is also designated as a *High Landscape Value Area.* A picnic area and information board have been located further down the slopes of the mountain along the local road and a looped walking route leaves from here and passes the existing telecommunications towers on the mountain. The panoramic view from the top of the mountain takes in three windfarms to the west and the man-altered inhabited landscape of the lowlands. Dun a Rí Forest Park is located to the east of Kingscourt approximately 3.8km distance from the line route. The site of the Fair of Muff is located within this Landscape Unit and a commemorative sculpture has been erected near the fair site.	This part of County Cavan has moderate potential capacity to absorb the landscape and visual effects of a transmission line. Topographic variation in this unit is more influenced by underlying bedrock geology – which produces less steep slopes and larger areas of visual enclosure. On the other hand there are more areas of taller vegetation in this unit which produces a corresponding increase in visual screening by mature vegetation.	The parts of the 5km study area within County Cavan are of moderate to high sensitivity. Views from the most elevated parts of the landscape unit at Lough an Leagh Mountain are sensitive, although current views include existing electricity and telecommunications infrastructure. The location of the long-standing annual Fair of Muff is also sensitive as it attracts large numbers of people and has cultural connections with the wider landscape.

11.4.4 Summary Landscape Value

59 Criteria for the determination of landscape value are set out in Table 11.2, **Appendix 11.3 Volume 3D Appendices** of the EIS. Landscape value is determined by landscape quality / condition, scenic quality, rarity, representativeness, conservation interests, recreation value, perceptual aspects and associations. The landscape units of highest landscape value are: A (Mullyash Uplands) and E (Highlands of East Cavan) due to their upland nature, relative rarity and recreation use. The landscape features of most value, as defined in this EIS, within each landscape unit, have been described in **Section 11.4.3**.

11.4.5 Summary – Landscape Capacity

60 Criteria for the determination of landscape capacity are set out in Table 11.3**, Appendix 11.1, Volume 3C Appendices** of the EIS**.**

61 An undulating landscape generally has the capacity to absorb the visual effects of a transmission line where the effects are localised within the small scale landscapes between drumlins. However, in locations where the line crosses higher ground, in order to minimise direction changes, or avoid identified constraints (lakes, recreational sites etc.), the potential for wider visual effects increase.

11.4.6 Summary – Sensitivity of the Landscape

62 The criteria for the determination of landscape and visual sensitivity are contained in Tables 11.4 and 11.5, **Appendix 11.1, Volume 3C Appendices** of the EIS**.**

63 The most sensitive areas are located in Sections A (Mullyash Uplands) and E (Highlands of East Cavan). The other landscape units are generally of moderate sensitivity with pockets of higher sensitivity in the vicinity of lakes, where views are available from higher ground and where the general drumlin landscape opens up to allow for wider views into the landscape. The scale of the proposed development has, however, the potential to cause significant alteration to the landscape character of areas in the near vicinity of the alignment most noticeably at distances of up to 600 - 800m from the alignment.

64 The highest visual sensitivity occurs where the changed landscape is an important element in the view, this generally occurs in views from residential properties, areas of settlement and viewpoints within valued or sensitive landscapes.

65 The *Final Re-evaluation Report* (April 2013) appraised the general capacity of the landscape in a wider context in order to avoid the areas of least capacity to absorb a transmission line. The preferred line route that emerged from this study and which is the subject of this evaluation,

traverses areas that generally have a higher capacity to absorb the transmission line within counties Cavan and Monaghan.

Table 11.3: Summary of Landscape Capacity and Sensitivity

Landscape Unit		Towers	Landscape Value	Landscape Capacity to absorb the proposed development	Landscape Sensitivity to the proposed development
A	Mullyash Uplands	Tower 103 to 128	Moderate / High	Low / Moderate	Moderate / High
B	Monaghan Drumlin Uplands	Towers 129 to 136	Moderate	Moderate	Moderate
C	Ballybay Castleblayney Lakelands	Towers 137 to 142	Moderate	Moderate	Moderate
D	Drumlin and Upland Farmland of South Monaghan	Towers 143 to 211	Moderate	Moderate	Moderate
E	Highlands of East Cavan	Towers 212 to 239	Moderate / High	Moderate	Moderate / High

11.5 POTENTIAL IMPACTS

11.5.1 Do Nothing

66 In this scenario there will be no changes to the landscape, it will continue to change and evolve as a result of other factors.

11.5.2 Construction Phase

67 Chapter 7 **Volume 3B** of the EIS details the approach to construction and the timescales involved in the various stages.

68 The potential landscape and visual effects arising at construction stage will occur due to the removal of vegetation, visible construction machinery, temporary access routes of approximately 4m width, a construction material storage yard, guarding positions (where the conductor is to be strung over roads and rivers and existing distribution lines) and increases in vehicular movements. The visual effects of the construction of the towers will be temporary and locally significant as most construction occurs as isolated areas of activity which are limited in size. The landscape and visual impact of traffic movements will have a more widespread effect.

69 The nature of temporary access routes is described in detail in Chapter 7, **Volume 3B** of the EIS. This will result in localised and generally temporary landscape changes to the surface of fields and removal of hedgerow and tree vegetation but have little effect on the wider landscape.

70 The highest physical landscape effects will occur at construction stage. The removal of vegetation is described in detail in **Chapter 6** in this EIS. The potential effects on soil are described in detail **Section 11.5.4.6** and in **Chapter 7** of this volume of the EIS. The removal of vegetation and in particular of mature trees where required will have locally significant physical landscape effects. Trees adjacent to the towers or conductors with the potential to fall on the conductors will be cut back to ensure safety clearances. The nature of long term impact will depend on the success of vegetation reinstatement. Potential landscape impacts of soil compaction include failure of vegetation reinstatement and long term ruts.

11.5.2.1 Changes to Existing 110kV Overhead Line Infrastructure

Between Towers 130 and 131

71 An existing 110 kV poleset which is 17.7m in height above ground level will be replaced by a lower one of 11.7m. It is also proposed to erect two new polesets in the existing spans either side of the 400 kV crossing that will be 15.7m and 13.7m in height above ground level respectively. During construction, excavations of approximately 2.3m depth and approximately 0.5m width will be made at each pole.

72 The receiving landscape character in this location is sensitive due to the proximity to a number of lakes and the potential for cumulative impact arising from existing and proposed electricity infrastructure has been identified in the EIS. There will be short term visual impacts locally during the construction period arising from the movements of people, materials and machinery. The physical landscape effects are not significant considering the relatively small excavations required and bearing in mind that no hedgerows will be affected. The reduction in size of one poleset is a positive impact, but the addition of two new polesets will slightly increase the cumulative landscape impacts arising from transmission infrastructure locally.

73 One of the new polesets is likely to be partly and distantly visible from the local road to the northwest of the line route, however given the distance from public viewpoints and the current existence of polesets in the landscape the additional visual impact is not significant.

Between Towers 180 and 181

74 An existing 110 kV poleset which is 19.7m in height above ground level is to be replaced by a new lower poleset 18.7m in height above ground level. An existing tower which is 19.6m in

height above ground level will be replaced with a new lower poleset which is 18.7m in height above ground level. During construction, excavations of approximately 2.3m depth and approximately 0.5m width will be made at each pole.

75 There will be short term visual impacts locally during the construction period arising from excavation and the movements of people, materials and machinery. After the construction period the reduction in height of the polesets will have a very slightly, and generally imperceptible, positive impact on landscape character locally.

11.5.3 Operational Phase

11.5.3.1 Introduction

76 This section describes the potential landscape and visual effects of the proposed development in the CMSA. As set out in the previous section of this chapter, the landscape within the study area is generally robust and has proven to be capable of undergoing change without altering its underlying landscape character. The previous section has also identified the more sensitive locations and features within the study area, which would suggest that the highest landscape and visual effects will occur where:

- Towers are viewed in close proximity with no intervening screening;
- Towers are located on top of drumlins;
- Towers are located close to lakes; and
- Towers are located close to scenic or in panoramic view points.

77 This section uses photomontages as a tool to assist in the description of potential effects. In order to provide an overview of the nature of visibility at various distances, **Section 11.5.3** contains a selection of representative photomontages. These illustrate the nature of visibility in typical landscapes crossed by the alignment. The nature of visibility is shown at distances of up to 500m, 500m - 1km, 1 - 1.5km, and beyond 1.5km. The effects on scenic viewpoints within 2km of the alignment are also shown.

78 **Section 11.5.3** follows with a detailed description of the landscape and visual effects within each landscape unit supported by a series of reduced scale photomontages for illustrative purposes.

79 A full-scale set of photomontages are contained in **Volume 3C Figures** of the EIS and the detailed location and context of photomontage views are indicated on the mapping in Figures

11.3 – 11.6, **Volume 3C Figures** of the EIS. All photomontage locations are publically accessible.

11.5.3.2 Key Representative Photomontages

80 The area through which the proposed line route passes is widely inhabited, with many houses and farms located along a dense road and hedgerow network. Hedgerows and drumlins provide screening of OHL in many areas. Due to the inhabited character of the landscape, visual receptors are spread throughout the study area. However, it is not possible or warranted to assess or represent visually all potential viewpoints, and therefore this section sets out the nature of visibility at various distances: up to 500m, 500m - 1km, 1 - 1.5km, beyond 1.5km as well as the effects on scenic viewpoints within 2km of the alignment. These represent the most open and 'worst case' views of the proposed development at these types of distances.

81 Some of these representative views are only possible from extremely localised viewing points, but they are provided to offer an indication of the maximum potential effect. There will generally be less effect on the appearance and character of the landscape when seen from other areas within the study area.

82 The photomontages presented in this section are at a reduced scale for illustrative purposes. Full scale photomontages and wireframes are contained in **Volume 3C Figures** of the EIS. The best way to use the photomontages as a tool is to view them in the field, in the location where the photograph was taken.

11.5.3.3 Viewing Distances of up to 500m

83 The following reduced scale photomontages represent a range of 'worst case' open viewing experiences within 500m of the proposed development. Full scale versions of these photomontages and accompanying wireframes and technical details are included in **Volume 3C Figures** of the EIS.

84 Towers are dominant in close views where there is no intervening vegetation or topography, where there are gaps or lower than average roadside vegetation. Even at close distance, vegetation and topography can reduce the visibility or visible extent of towers from specific viewing locations. The nature of visibility changes when the towers are viewed against the sky or the land. In general terms, the visual impact is greatest when the transmission line is seen silhouetted against the sky and least when seen against a dark, visually complex background – such as trees or vegetated hills.

Photomontage 8 from an open section of the N2, at a distance of 445m. This represents an open view where two towers are visible against the skyline in the context of a national road.

Photomontage 11 from an open section of the L7411 in the townland of Drumroosk approximately 3.5km north-west of Doohamlet, at a distance of approximately 224m. This represents an open view where one tower is visible at close distance against the skyline from a local road.

Photomontage 21 from the junction of the R180 and L4210 at the townland of Greagh (Cremorne By) and Tullynahinnera, at a distance approximately 336m. This represents an open view where three towers are visible against the skyline in the context of a national road in a broad valley.

Photomontage 31 from the R178, 2.5km east of Shercock at a distance of approximately 456m. This represents an open view where five towers are partly visible against the skyline on higher ground in the context of a regional road.

Photomontage 39 from an open section of L7567 at the location of the Fair of Muff, at a distance of approximately 215m. This represents an open view where two towers are visible against the skyline on relatively higher ground.

Photomontage 44 from an open section along the R164 at Corrananagh, at a distance of approximately 271m. This represents an open view where two towers are visible against the skyline, partially screened by vegetation.

11.5.3.4 Viewing Distances of 500m - 1km

85 The following reduced scale photomontages represent a range of 'worst case' open viewing experiences of between 500m and 1km from the proposed development. For full scale versions of these photomontages and accompanying wireframes and technical details, refer to **Volume 3C Figures** of the EIS.

86 Towers are still noticeable in the context of a wider landscape. The screening effects of vegetation, buildings and topography become more apparent. The towers are more conspicuous if sited on higher ground, or if the viewing point is elevated.

Photomontage 12 from local road L7411 at Drumroosk townland at a distance of approximately 603m. This represents an open view from an elevated location over a landscape of dense drumlins. Six towers are partly visible, travelling into the distance, a further four are screened by topography.

Photomontage 16 from the R183 in Ballintra, at a distance of approximately 690m. This represents an open view where four towers are visible against the skyline on higher ground in the context of a regional road, a further two are screened by topography.

Photomontage 18 from L3200 in the townland of Clogher, at a distance of approximately 631m. This represents an open view from an elevated location over a landscape of drumlins. Two towers are partly visible, a further one is screened by topography.

Photomontage 28 from Ouvry Cross Roads, at a distance of approximately 610m. This represents an open view from a location between drumlins. Three towers are partly visible, travelling into the distance, others are screened by topography.

Photomontage 30 from the R178 in the townland of Corvally (Farney By), at a distance of approximately 942m. This represents an open view in a drumlin landscape in the context of a regional road. One tower is distantly partially visible, and a further three are screened by topography or vegetation.

Photomontage 32 from the L49051 in the townland of Raferagh, at a distance of approximately 578m. This represents an open view in a low drumlin landscape. Two towers are visible against the skyline.

Photomontage 35 from the R162 at the cross roads with the L8920 a distance of approximately 924m. This represents an open view in a drumlin landscape in the context of a regional road. One tower is partly visible over the white building in the centre left, while three others are screened by topography or vegetation.

11.5.3.5 Viewing Distances of 1 - 1.5km

87 The following reduced scale photomontages represent a range of 'worst case' open viewing experiences at 1-1.5km from the proposed development. For full scale versions of the photomontages and accompanying wireframes and technical details, refer to **Volume 3C Figures** of the EIS.

88 It becomes difficult to discern the towers in the landscape, and in most cases the towers are not visible at this distance. Towers are still distantly visible if seen traversing higher ground or over very flat ground where there is a gap in intervening vegetation.

Photomontage 4 from the L7511 across the townland of Tassan, at a distance of approximately 1.31km. This represents an open view over a relatively flat landscape. Four towers are partly visible in the distance, the remainder are screened by relatively low roadside hedgerow.

Photomontage 22 from the L4210 across the townland of Lough Morne, at a distance of approximately 1.29km. This represents an open view from an elevated location over a landscape of drumlins. Five towers are partly and distantly visible, others are screened by topography.

Photomontage 29 from the L4031 at the northern boundary of Corduff, at a distance of approximately 1.1km. This represents an open view from a slightly elevated location with winter vegetation. One tower is partly visible, others are screened by vegetation and topography.

11.5.3.6 Viewing Distances of Greater than 1.5km

89 The following reduced scale photomontages represent a range of viewing experiences greater than 1.5km from the proposed development.

90 It is not normally possible to distinguish the towers from the surrounding landscape at this distance unless they are seen against the sky in clear weather conditions.

Photomontage 1 from the junction of the L3530, L33101 & L7510 in the townland of Crossaghy, at a distance of approximately 2.69km. No towers are visible due to the screening effects of vegetation.

Photomontage 15 from the L3430 in the outskirts of Doohamlet, at a distance of approximately 1.57km. This represents an open view towards drumlins on the horizon. Three towers are partly visible in the distance. A further two are screened by topography or vegetation.

Photomontage 17 from Lough Major, Ballybay, at a distance of approximately 2.86km. This represents an open view across a lake where three towers are partly visible in the distance. A further thirteen are screened by topography or vegetation.

Photomontage 23 from a local hill (Waterworks Reservoir) in the townland of Kilkit, at a distance of approximately 3.32km. This represents an open view from an elevated location. No towers are discernible at this distance when viewed against the land.

Photomontage 33 from the R162 at Taghart North a distance of approximately 1.78km. This represents an open view in a drumlin landscape in the context of a regional road. Two towers are partly visible, with a further five screened by topography, vegetation or buildings.

Photomontage 40 from the L3531 in the townland of Moyer located in the East Cavan Highlands at a distance of approximately 1.42km. This represents an open unscreened view from an elevated location where fifteen towers are theoretically visible across a flat landscape.

11.5.3.7 Recognised Scenic Viewpoints within approximately 2km of the Line Route

Photomontage 19 from Scenic View 21 at Lough Egish, at a distance of approximately 2.25km. Five towers are distantly visible, with a further seven screened by topography or vegetation.

Photomontage 26 from L40431, Scenic Route SV22 in the townland of Tooa, at a distance of approximately 1.22km. Eleven towers are partially visible and one is screened by topography, however those seen against land are difficult to discern.

Photomontage 41 from Scenic View 8 at Lough an Leagh Gap, at a distance of approximately 2.15km. Eight towers are visible with a further three screened by vegetation.

11.5.4 Description of Potential Landscape and Visual Effects on Landscape Units

91 The following section provides a description of the likely effects on the appearance and character of each of the parts of the landscape that have been identified as 'Landscape Units' - areas of approximately similar character in the previous sections.

92 The potential landscape and visual effects within each landscape unit are described along with potential effects on identified sensitive landscape features or visual receptors. This information is summarised in a table, to assist readers in obtaining a comprehensive overview of all landscape and visual effects arising from this development. These impacts are then illustrated in the following section by referring to reduced scale photomontages. Full scale photomontages and wireframes are contained in **Volume 3C Figures.** The best way to use the photomontages as a tool is to view them in the field, in the location where the photograph was taken.

11.5.4.1 Landscape Unit A – Description of Potential Landscape and Visual Effects

Landscape Unit A – Mullyash Uplands		
		
General Landscape Character	The area is a man-altered landscape which includes small drumlins, flat upland areas and Mullyash Mountain to the east. The area has potential for high visibility of tall structures in the more elevated locations. The character of the landscape is more built up as one moves south towards the N2.	**POTENTIAL LANDSCAPE EFFECTS** • There will be changes to landscape character in the immediate vicinity of the line (up to 600 - 800m from unscreened towers), but little alteration to the character of the wider landscape. • The line route avoids the higher ground at Mullyash Mountain, and there is no landscape effect on this valued landscape feature. • The introduction of towers into the more remote generally flat upland plateau landscapes close to the border will result in significant localised landscape effects (see photomontage 5). Towers within valleys are more contained, and will not significantly affect the landscape beyond the valley. However, the localised landscape effect on the small scale of the remote valley along the border will be significant. • Landscape effects reduce as one moves south towards the N2, as the landscape character is more defined by existing built infrastructure (see photomontage 8 / 9). **POTENTIAL VISUAL EFFECTS** • Photomontage 6 shows that the transmission line will not be visible from the slopes of Mullyash Mountain. • The transmission line will be partially visible from houses and roads within 1 - 1.5km of the line with no intervening vegetation such as along the roads running parallel to the border in Lemgare (photomontage 2 and 5), at a location crossing the N2 and former N2 (photomontage 8 and 9).

		Visual effects reduce with distance, with the most significant effects occurring up to 600 - 800m from unscreened towers. The towers would be difficult to discern at distances beyond 800m. • Some of the lower lying parts of the landscape contain scrub vegetation which restricts views and many potential viewpoints will be screened by vegetation and topography. • Towers 119 – 121 on the rising ground east of the N2 will be more visible than others due to their relative elevation. These include transposition towers, which are taller and slimmer than the towers along the rest of route. However the difference in tower type will not significantly alter the visual effect, which will be locally significant. (Refer to photomontage 7).
Settlements	Clontibret, Creaghanroe and Annayalla are the main settlements. There are individual houses throughout the countryside and along roads.	There will be no significant visual effects on the villages. However, any houses up to 1-1.5km from the line route, with no or little intervening screening vegetation will have potential visibility of the towers. The most significant effects would be experienced in views up to 600-800m from the line route, where there is no or little intervening vegetation. The nature of visibility over distance is shown in **Section 11.5.3.**
Scenic Viewpoints	SV11 View northwards at Tullybrack. SV12, 13, 14 Scenic drive and views of open countryside from Mullyash.	None of these recognised Scenic Viewpoints will be affected by the proposed development.
Key Landscape Features	Mullyash Mountain Site of Battle of Clontibret Tassan Lough Lough Nahinch	Mullyash Mountain will not be affected by the proposed development. A monument commemorating the Site of the Battle of Clontibret (commemorative plaque) is located approximately 1.7km from the line route. Clontibret was a running battle so there is no clear extent to the battle site. There is no significant effect on the setting of Clontibret battle site considering the distance to the line route and the screening effects of intervening vegetation. Tassan Lough is located approximately 300m from the line route. Towers would be visible at close proximity to the lake, in views from the adjacent road. Therefore there would be localised significant visual effects. The current remote character of the small lake would be affected.

		The area around Lough Nahinch (located approximately 600m from the line route) is quite scrubby and therefore views are more enclosed.
Driving, Cycling & Walking Routes	Monaghan Way (Walking route)	The Monaghan Way will parallel the line route for approximately 2km at a distance of between 0 and 400m. Longer distance intermittent views would be possible for distances up to 1.5km from the line. The walking route will cross under the line route between towers 109 and 110. The section that parallels and crosses the line route will experience open views of towers at close proximity where there is no intervening vegetation, resulting in localised significant visual effects. Photomontage 3 and 5 shows the type of visual impact that would occur in close vicinity to the line. Photomontage 2 shows a view from a part of the Monaghan Way that is more screened. This section of the walking route forms only a small part of the long distance way which crosses through a mixture of remote and inhabited landscapes – therefore the development will affect a part of the walking experience, introducing a more industrial landscape character along the route for approximately 2km.
Historic Designed Landscapes	Lakelands	There will be no effects on this Historic Designed Landscape.

93 The following photomontages show the potential landscape and visual effects of the proposed transmission line within Landscape Unit A – Mullyash Uplands. Full scale photomontages and wireframes are contained in **Volume 3C Figures** of the EIS

Photomontage 1 at the site of the Battle of Clontibret in Crossaghy, approximately 2.69km to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

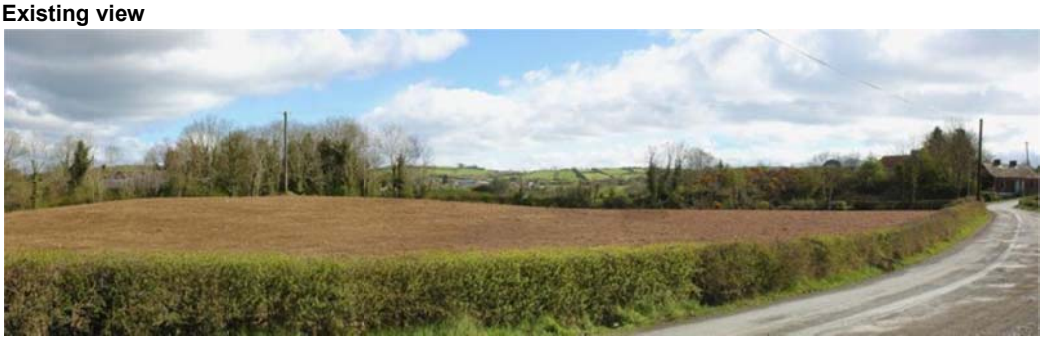
Reason for selection: This photomontage represents a view along the Monaghan Way and close to a monument to the Battle of Clontibret.

Landscape effects – There would be no landscape effects at this location.

Visual effects - The transmission line would not be visible from this location.

Photomontage 2 from the L7502 in the townland of Coolartragh, approximately 474m to closest tower

Existing view



Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the nature of views from a stretch of the Monaghan Way.

Landscape effects – The proposed development will be experienced in the context of a local road, houses and existing utilities infrastructure and will therefore intensify an inhabited agricultural landscape character. The open character of the drumlin ridgeline will change to include the towers where open views are possible. The character of the valley will change with the introduction of towers that are of larger scale than anything else within the valley. The more enclosed parts of the valley with hedgerows or stands of trees will experience less landscape impact.

Visual effects - One tower is partially seen against the skyline but three are screened by topography or vegetation. This type of intermittent screening continues along this road southwards, but there are some areas with more open views where open and oblique views of the proposed development are possible. In these cases visibility would be similar to that shown in photomontage 3.

Photomontage 3 looking south from Crossbane Rd. in Armagh, approximately 321m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage represents an open view from Crossbane road, Armagh into the valley that parallels the border in this location.

Landscape effects – There would be significant localised effects on this small scale valley. The character of the valley will change with the introduction of towers that are of larger scale than anything else within the valley. Landscape effects are closely related to visual effects and the more enclosed parts of the valley with hedgerows or stands of trees will experience less landscape impact.

Visual effects – The transmission line will be visible from parts of Crossbane Road where there are gaps in the roadside vegetation. The towers will be mainly seen against the backdrop of hills.

Photomontage 5 at Lisdrumgormly townland, approximately 200m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the transmission line viewed against the skyline in a relatively upland area. The screening effects of topography are shown – the towers in the distance are not visible due to the plateau like nature of this location.

Landscape effects – Scrub vegetation is encroaching as fields are abandoned in this part of the Mullyash uplands. Settlement is sparse and the remote character in this location will change with the introduction of a transmission line. The open character of the skyline will change to include the towers where open views are possible.

Visual effects - The open nature of the landscape means that towers will be visible from parts of the roads in this location. Many areas are, however, more enclosed by hedgerows or scrub vegetation. As scrub grows it will further enclose views in the uplands.

Photomontage 7 from the former N2 in the townland of Cashel at junction with the L7422, approximately 440m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the transposition towers crossing relatively elevated land close to a busy road.

Landscape effects – The towers are seen against the skyline which alters the currently open character of the horizon in this location. The transposition towers are taller than other towers and of a different design, although this is not immediately apparent. The landscape character in this location is influenced by the existing road infrastructure and associated signs as well as residential and farm buildings. The proposed development therefore represents an intensification of this built rural infrastructure and introduces a new scale of tower into the landscape.

Visual effects - The lack of roadside hedgerow and location of the towers on relatively higher ground mean that towers will be visible crossing the former N2 in this location. The highest significant effects will be localised due to the screening effects of topography over longer distances.

Photomontage 8 from the N2, approximately 445m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the crossing of the N2 in a location where open views are possible over the landscape.

Landscape effects – The towers are seen against the skyline which alters the currently open character of the horizon in this location. The transmission line will contribute to an intensification of a landscape character which has been influenced by road infrastructure.

Visual effects - The transmission line crosses the road perpendicularly which minimises the visual effects for drivers. The towers would be discernible because of the very open landscape in this location. They would be seen in the context of a rural landscape which contains existing infrastructure in the form of roads and buildings.

11.5.4.2 Landscape Unit B – Description of potential landscape and visual effects

Landscape Unit B – Monaghan Drumlin Uplands		
		
General Landscape Character	The undulating landscape includes elevated upland drumlin areas and lowland loughs with marshland and pasture farmland. There are some open areas with relatively wide visibility.	**POTENTIAL LANDSCAPE EFFECTS** • There will be changes to landscape character in the immediate vicinity of the line (up to 600 - 800m from unscreened towers), but as the towers generally follow the lower parts of the landscape there will be little alteration to the character of the wider landscape. • The eastern slopes of a drumlin are crossed at Cornanure (Monaghan By) with locally higher landscape effects • The alignment runs approximately 200 - 300m to the north of Coogan's Lough, Drumgristin Lough and Ghost Lough. An existing 110 kV line crosses Coogan's Lough. There will be cumulative localised landscape effects on the setting of these Loughs. • There would be no significant landscape effects on the setting of Cordoo Lough or Corlin Lough **POTENTIAL VISUAL EFFECTS** • The most visible towers will be those on the upper parts of drumlins. It will be more difficult to discern towers on lower ground in this complex topographical landscape. • The transmission line will be partially visible from houses and roads up to 1 - 1.5km from the line where there is no intervening vegetation or topography and from elevated areas such as the drumlin immediately to the east of Drumgristin Lough. Visual effects reduce with distance, with the most significant effects occurring up to 600 - 800m from unscreened towers. The towers would be difficult to discern at distances beyond 800m and visual effects would be less in areas with a dense drumlin pattern.

Settlements	There are individual houses throughout the countryside and along roads.	Houses up to 1-1.5km from the line route, with no or little intervening screening vegetation will have potential visibility of the towers. The most significant effects would be experienced in views up to 600-800m from the line route, where there is no or little intervening vegetation. The nature of visibility over distance is shown in **Section 11.5.3.**
Scenic Viewpoints	SV9 View of St Macartens Cathedral, Monaghan from Berry Brae	There will be no impact on this scenic viewpoint due to the distance from the proposed development.
Key Landscape Features	Cordoo Lough Natural Heritage Area	There will be no impact on this landscape feature due to the distance from the proposed development.

94 The following photomontages show the potential landscape and visual effects of the proposed transmission line within Landscape Unit B – Monaghan Drumlin Uplands. Full scale photomontages and wireframes are contained in **Volume 3C Figures** of the EIS

Photomontage 12 at Drumroosk townland, approximately 603m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage represents the types of panoramic views possible from upper parts of drumlins within approximately 600m of the proposed development.

Landscape effects – The towers that are located on the lower ground are absorbed into the broad landscape, but those on the upper parts on drumlins result in landscape effects arising from their intrusion on the skyline. These effects occur in a landscape context that contains houses, existing electricity lines and a wind farm on the horizon.

Visual effects – The most visible towers are those on the upper parts of drumlins. It is more difficult to discern towers on lower ground in this complex topographical visual scene.

11.5.4.3 Landscape Unit C – Description of Potential landscape and visual effects

Landscape Unit C – Ballybay Castleblayney Lakelands		
		
General Landscape Character	This unit includes pronounced drumlin pasture and the village of Doohamlet. Views are generally enclosed by the tight network of drumlins - more open views are possible from more elevated parts of the landscape. There are two lakes within 5km of the line route. The line route crosses the R183 perpendicularly.	**POTENTIAL LANDSCAPE EFFECTS** • There will be changes to landscape character in the immediate vicinity of the line (up to 600 - 800m from unscreened towers), but little alteration to the character of the wider landscape. • Towers 137 - 141 cross the higher parts of drumlins and therefore the currently open character of this drumlin ridgeline will change. This effect occurs in the context of a landscape that includes main roads, houses and powerlines. • There would be no significant landscape effects on the setting of Lough Major at Ballybay or Tonyscallon Lough near Doohamlet. **VISUAL EFFECTS** • The transmission line will be partially visible from houses and roads up to 1 - 1.5km of the line where there is no intervening vegetation or topography and from elevated areas such as the location north of Doohamlet shown in photomontage 15 and at Cornahoe. Visual effects reduce with distance, with the most significant effects occurring up to 600 - 800m from unscreened structures. The towers would be difficult to discern at distances beyond 800m and visual effects would be less in areas with a very dense drumlin pattern. • The crossing point of the R183 is perpendicular and it occurs in a part of the landscape with existing electricity lines and houses and good screening provided by the surrounding drumlins - the most significant visual effects

		will be experienced by drivers for a short time. • Parts of the towers may be visible briefly at a distance of 1km along with glimpsed views of Tonyscallon Lake when travelling along the R183. These, if discernible, would be seen in the context of a built up landscape with houses and existing powerlines and would not result in significant visual effects.
Settlements	Doohamlet. There are individual houses throughout the countryside and along roads.	• There would be no significant views of the transmission line from within Doohamlet itself due to the screening effects of drumlins and buildings. • Houses up to 1-1.5km from the line route, with no or little intervening screening vegetation will have potential visibility of the towers. The most significant effects would be experienced in views up to 600-800m from the line route, where there is no or little intervening vegetation. The towers would be difficult to discern at distances beyond 800m. The nature of visibility over distance is shown in **Section 11.5.3**.
Scenic Viewpoints	SV15, SV16, SV17 Scenic Drive along Lough Muckno.	• The transmission line will not be visible from these scenic viewpoints due to the effects of distance
Key Landscape Features	Tonyscallan or Dernaglug Lough Lough Major, Ballybay 3km to the west Lough Muckno and Environs Annaghmekerig Lake, Woodlands and environs. Dromore River and lake system including White Lake and Bairds Shore	• There will be no significant landscape effects on any of these key landscape features due to their distance from the proposed development.

95 The following photomontages show the potential landscape and visual effects of the proposed transmission line within Landscape Unit C – Ballybay Castleblayney Lakelands. Full scale photomontages and wireframes are contained in **Volume 3C Figures** of the EIS.

Photomontage 15 looking west from L3430 just north of Doohamlet, approximately 1.57km to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage represents open views from the surroundings of Doohamlet.

Landscape effects – The towers that are located on the lower ground are absorbed into the broad landscape, but those on the upper parts of drumlins result in landscape effects arising from their intrusion on the skyline. These effects occur in a landscape context that contains houses and existing powerlines, and are in scale with other landscape features.

Visual effects – The most visible towers are those on the upper parts of drumlins and they are openly seen against the skyline from this location. At this distance, visibility would depend on weather conditions.

Photomontage 16 from the R183 in Ballintra, approximately 690m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage represents open views from the R183 where towers cross a drumlin ridge.

Landscape effects – Towers on drumlins result in landscape effects arising from their intrusion on the skyline. These effects occur, however, in a landscape context that contains buildings, a main road and existing powerlines. This location is unusual in that three towers are openly visible on drumlins and the landscape effect would be locally significant.

Visual effects – Three towers are openly visible on tops of drumlins, this would result in locally significant visual effects. The towers are seen in the context of a man-altered landscape and the overall visual effect reduces rapidly with distance.

Photomontage 17 from Lough Major at Ballybay, approximately 2.86km to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the view from recognised amenity site at Lough Major in Ballybay.

Landscape effects - There would be no significant effect on the character of this landscape.

Visual effects – While one tower is very distantly visible, the transmission line would not be normally discernible at this distance.

11.5.4.4 Landscape Unit D – Description of Potential Landscape and Visual Effects

Landscape Unit D – Drumlin and Upland Farmland of South Monaghan		
		
General Landscape Character	The northern part of this landscape unit consists of broad shallow valleys which are more open than the more enclosed and complex landscape created by the larger than average drumlins and lakes further south in the unit. The drumlins and vegetation become more dense east of Shercock with curtailed long distance visibility.	**POTENTIAL LANDSCAPE EFFECTS** • There will be changes to landscape character in the immediate vicinity of the line (within 600 - 800m of unscreened towers), but little alteration to the character of the wider landscape. • Towers 164 - 167 cross the higher parts of drumlins and therefore the currently open character of the local drumlin ridgelines will change (see photomontage 24). • There would be no significant landscape effects on the setting of the largest lake in the environs of the line route, Lough Egish, or on the setting of Lough Troome, Shanontonagh or Greaghlone / Beagh Lough. The transmission line will be experienced from the environs of the following smaller lakes; Lough Boraghy, Lough Morne, Muff Lough and Bock's Lough (although this particular lake is well wooded). **POTENTIAL VISUAL EFFECTS** • The transmission line will be partially visible from houses and roads up to 1-1.5km from the line where there is no intervening vegetation or topography and from relatively elevated areas such as Cornmagh. Visual effects reduce with distance, with the most significant effects occurring up to 600-800m from unscreened towers. The towers would be difficult to discern at distances beyond 800m and visual effects would be less in areas with a dense drumlin pattern. • The crossing points of the R178, R180 and R181 are perpendicular which reduces the visual effect – the most

		significant visual effects will be experienced by drivers for a short time.
Settlements	There are individual houses throughout the countryside and along roads.	• Houses up to 1-1.5km from the line route, with no or little intervening screening vegetation will have potential visibility of the towers. The most significant effects would be experienced in views up to 600-800m from the line route, where there is no or little intervening vegetation. The towers would be difficult to discern at distances beyond 800m. The nature of visibility over distance is shown in **Section 11.5.3**.
Scenic Viewpoints	SV18, 19 Distant views of Lough Muckno and Slieve Gullion SV20 Views of Slieve Gullion at Taplagh, Broomfield SV21 Scenic views of Lough Eglish SV22 Scenic drive at Beagh, Shantonagh and Corlat SV23 a view towards Lough Bawn and County Cavan	• The line route will be visible from SV22 – Scenic Drive at Beagh, Shantonagh and Corlat near Shantonagh House. The nature of visibility of the transmission line from this location is shown in photomontages 26 and 27. While the tops of towers are visible, most of the proposed development would be visually absorbed by being seen against a backdrop of the undulating topography. • There are no significant effects on SV21 (scenic views of Lough Eglish) due to the effects of distance and intervening topography.
Key Landscape Features	Loughbawn House and Loughs Lough Eglish. Cornasus *High Landscape Area* Lough an Leagh Mountain Dun a Ri Forest Park Moybologue Church	There will be no effects on any of these identified landscape features due to the distance from the proposed development.
Walking Routes	Lough an Leagh Dun a Rí Forest Park Castle Walk Bailieborough	There will be no significant effects on any of these identified walking routes due to the distance from the proposed development.
Historic Designed	Tully House	The line route crosses the eastern edge of Shantonagh demesne, with minor landscape effects on this historic designed landscape.

Landscapes	Shantonagh House Lakeview House Dun a Rí Forest Park	There will be no significant effects on any of these identified sites due to the distance from the proposed development.

96 The following photomontages show the potential landscape and visual effects of the proposed transmission line within Landscape Unit D – Drumlin Upland Farmland of South Monaghan. Full scale photomontages and wireframes are contained in **Volume 3C Figures** of the EIS

Photomontage 18 from L3200 across the townland of Clogher, approximately 631m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the proposed development from an elevated location with views over drumlin tops towards higher ground in the distance.

Landscape effects – As the alignment follows the lower parts of the landscape, most of the proposed development has no significant effect on the landscape character. However, the ridgeline of a drumlin is broken by one of the towers. The scale of this is perceived as being generally in keeping with other built features in the landscape from this location.

Visual effects – One tower is partially visible and another is visible against a backdrop of land. A third is screened by topography. There is some intrusion on the views towards the higher ground in the distance. However, good screening is provided by vegetation and topography and by the effects of seeing a tower against land.

Photomontage 20 from the R180 at Brackly (Cremorne By) townland, approximately 462m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the alignment running parallel to and crossing the R180 and the screening effects of topography as towers travel into the distance.

Landscape effects – The landscape effects are not significant in this location as the screening within the landscape results in the proposed development being absorbed into this robust rural landscape character.

Visual effects – Three towers are partially visible and there is some intrusion on the view towards the drumlin in the distance. However, good screening is provided by vegetation, topography and buildings.

Photomontage 21 from the junction of the R180 and the L4210 at the townland of Greagh (Cremorne By) and Tullyhinnera, 336m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the alignment crossing a local road from the junction of the R180 and L4210 in a broad open valley landscape.

Landscape effects – The scale of the proposed development is apparent in this broad valley, with open landscape on both sides of the road. The landscape also contains a block of commercial forestry with provides some absorption of towers (bearing in mind a 74m corridor is required and that trees may need to be removed within this area). However the character of openness is locally adversely affected by the introduction of large scale towers in this location.

Visual effects – Three towers are partially visible against the skyline and the tower closest to the road will be a dominant feature where open views are possible, such as this one.

Photomontage 24 looking over Lough Morne, approximately 603m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

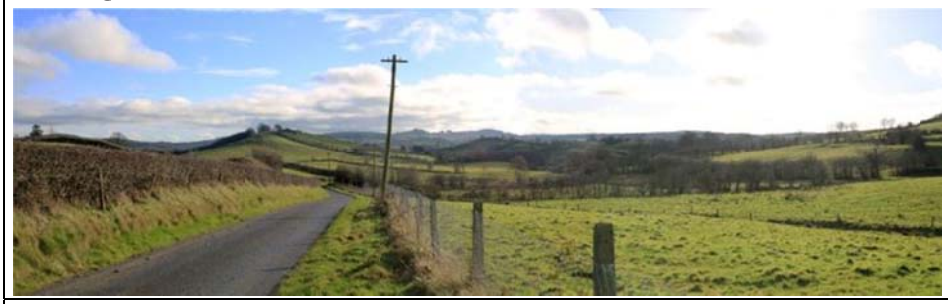
Reason for selection: This photomontage shows the view from a public road adjacent to Lough Morne.

Landscape effects – Line routing has aimed to avoid this combination of towers crossing higher ground in the vicinity of a lake, but it is not possible to avoid all potential impact of a linear development in a landscape with many lakes and drumlins. The setting of this small lake, as viewed from a local road, will be adversely affected by the location of the towers on adjacent drumlins.

Visual effects – Towers 167 and 168 are conspicuously visible on higher ground close to this small lake and adversely affect the visual amenity of this location.

Photomontage 26 from the L40431 (Scenic Road SV22) at Tooa townland, approximately 1.22km to closest tower

Existing view



Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the transmission line from a scenic route at Shantonagh.

Landscape effects – The towers that are located on the lower ground and seen against a backdrop of land are absorbed into the broad landscape, but those on the upper parts on drumlins result in landscape effects arising from their intrusion on the skyline. These effects occur in a landscape context with little other built towers in view. The visible parts of the alignment are in scale with the landscape at this distance.

Visual effects – The most visible towers are those on the upper parts of drumlins, which break the skyline. It is more difficult to discern towers on lower ground in this complex topographical visual scene.

Photomontage 29 from L4031 at Corduff, approximately 1.1km to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This is an open view from a slightly elevated location with winter vegetation.

Landscape effects – The landscape effects are not significant in this location as the screening within the landscape results in the proposed development being absorbed into this robust rural landscape character.

Visual effects – One tower is partly but distantly visible against the skyline, others are screened by vegetation and topography.

Photomontage 31 from the R178 approximately 2.5km east of Shercock, approximately 456m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the alignment crossing the R178.

Landscape effects – The proposed development is large but not dominant in this landscape which contains a main road with existing utilities infrastructure within an undulating landform.

Visual effects – Six towers are partially visible and there is some visual intrusion due to the fact that a tower is located on the slopes of a drumlin and therefore at a slightly elevated position.

Photomontage 34 from the L49033 in the vicinity of Lavagilduff, approximately 222m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the alignment crossing higher ground in a relatively remote valley.

Landscape effects – The scale of the landscape in this location is adversely affected by the proposed development due to the location of the towers on drumlin tops.

Visual effects – Three towers are partially visible and two are particularly visually dominant in this small scale landscape. The low hedgerows result in open views towards the drumlin ridgeline.

11.5.4.5 Landscape Unit E – Description of Potential Landscape and Visual Effects

Landscape Unit E – Highlands of East Cavan		
		
General Landscape Character	This unit includes the environs of Kingscourt and Lough an Leagh Mountain. The line route passes to the east of an area of designated landscape sensitivity in the Cavan CDP. The rest of the unit is low lying with high vegetation in many areas and more dense suburban type development on the outskirts of Kingscourt.	**POTENTIAL LANDSCAPE EFFECTS** • There will be changes to landscape character in the immediate vicinity of the line (up to 600 - 800m from unscreened towers), but little alteration to the character of the wider landscape. • Cumulative landscape effects will occur where the proposed line crosses the existing 220 kV line (Towers 232 – 235) at Corraneary (ED Enniskeen), Carrowreagh and Clonturkan. • There will be no significant landscape effects on Lough an Leagh Mountain. • There would be some landscape effect on the setting of Muff Lough. **POTENTIAL VISUAL EFFECTS** • The transmission line will be partially visible from houses and roads up to 1 - 1.5km of the line where there is no intervening vegetation or topography and from relatively elevated areas such as Cornmagh. Visual effects reduce with distance, with the most significant effects occurring with 600-800m of unscreened towers. The towers would be difficult to discern at distances beyond 800m. • The crossing points of the R162 and R165 are perpendicular which reduces the visual effect – the most significant visual effects will be experienced by drivers for a short time.

Settlements	There are individual houses throughout the countryside and along roads.	Houses up to 1 - 1.5km from the line route, with no or little intervening screening vegetation will have potential visibility of the towers. The most significant effects would be experienced in views up to 600 - 800m from the line route, where there is no or little intervening vegetation. The towers would be difficult to discern at distances beyond 800m. The nature of visibility over distance is shown in **Section 11.5.3**
Scenic Viewpoints	SV8 at Lough an Leagh Mountain.	The transmission line is approximately 2.1km from SV8 which looks down on the landscape from a height. Eight towers are potentially visible with a further three screened by vegetation. However, the transmission line would not be readily discernible at this distance particularly as the towers are seen against the backdrop of land, further reducing their visibility.
Key Landscape Features	Dun a Rí Forest Park. Lough an Leagh Mountain.	There will be no effects on these identified key landscape features due to the distance from the proposed development.
Walking Routes	Lough an Leagh. Dun a Rí Forest Park. Castle Walk, Bailieborough.	There will be no effects on these identified walking routes due to the distance from the proposed development.
Historic Designed Landscapes	Dun a Rí Forest Park.	There will be no effect on this historic designed landscape due to the distance from the proposed development.

97 The following photomontages show the potential landscape and visual effects of the proposed transmission line within Landscape Unit E – Highlands of East Cavan. Full scale photomontages and wireframes are contained in **Volume 3C Figures** of the EIS

Photomontage 36 from the R162 at elevated ground between the townlands of Tullybrick and Drumbrackan, approximately 1.08km to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows an open view from an elevated position on the R162.

Landscape effects – There are no landscape effects on this location due to the screening effects of topography.

Visual effects – While three towers are partially visible, there are no significant visual effects on this location due to the screening effects of topography.

Photomontage 38 from the R165 at Cornaman, 694m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows an open view from the R165 at a distance approximately 694m.

Landscape effects – There are no landscape effects on this location due to the screening effects of topography.

Visual effects – While one tower is partially visible, against a backdrop of land, there are no significant visual effects on this location due to the screening effects of topography.

Photomontage 39 from the L7567 near the site of the Fair of Muff, approximately 215m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage represents an open view in the vicinity of the Fair of Muff site.

Landscape effects – In landscape terms this site is similar to the wider landscape of east Cavan, however, these fields host the annual Muff Fair, and a commemorative statue and board has been erected. The presence of the transmission line will add an industrial characteristic to an inhabited and robust rural landscape which already contains roads, houses and electricity lines.

Visual effects – Two of the towers are partially visible from this location. One on higher ground is prominently visible due to its relatively elevated position and low roadside hedgerow at this particular viewing position.

Photomontage 41 looking east from Lough an Leagh Gap amenity site, approximately 2.15km to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This view is recognised as significant in the Cavan CDP. It is a picnic area with an information board and the start of a walk to the highpoint of the mountain. It is a rare elevated panoramic view in this area.

Landscape effects - There is no discernible effect on the elevated character of this landscape or on the expansive sense of visibility.

Visual effects - The transmission line would not be discernible at this distance particularly as the towers are seen against the backdrop of land, further reducing their visibility.

Photomontage 42 from the L3533 in the townland of Drumbar (Eniskeen By), approximately 629m to closest tower

Existing view

Proposed view including transmission line

Wireframe – blue shows what is in view, red shows what is screened by intervening vegetation or topography

Reason for selection: This photomontage shows the transmission line at close distance crossing a local road in an area of low drumlins.

Landscape effects – While a tower is visible breaking the skyline, there is no significant effect on drumlin character or the experience of a rural road bordered by continuous hedgerow.

Visual effects - The transmission line would be visible in the context of a network of hedgerows and a landscape containing an existing power line. The vegetation and topography limits significant visual effects to unscreened areas within the immediate vicinity of towers (up to approximately 400m), with visual effects decreasing rapidly with distance.

11.5.4.6 Potential Physical Landscape Effects

98 The main physical landscape effects arise from the need for the removal of vegetation. The degree of tree loping, trimming and removal will depend on a number of factors including tower height, closeness of hedgerow and towers and the lowest point of the conductor sag and topography. Areas where the line route passes through woodland will require the removal of an up to 74m swathe of trees (described in detail in **Chapter 6** of this volume of the EIS).

99 While a maximum working area of 30m x 30m around each tower may require removal of hedgerow vegetation at construction, (with the exception of Towers 166 and 168, where larger working areas are proposed), this will be reinstated, and therefore adverse impacts would be temporary. Towers 166 and 168 have larger working areas proposed to account for additional excavations required to stabilise ground adjacent to the foundation locations. The minimum width of these working areas is proposed to be 41m at Tower 168 and 34m at Tower 166. Other hedgerows along the line route will be permanently lopped or trimmed in order to accommodate required safety clearances. Hedgerows with a height of up to 6m are unlikely to be lopped, although the height will depend on the conductor sag. On reinstatement of vegetation, the continuity of any affected hedgerow or tree lines will be restored, but the linear open corridors through woodland will remain.

11.5.4.7 Potential Impact of the Proposed Construction Materials Storage Yard

100 Figure 11.11, **Volume 3C Figures** of the EIS shows the location of the proposed construction materials storage yard in relation to sensitive landscape features and the location of four views of the site: Viewpoints 1 - 4. The site for the proposed construction materials storage yard is shown below.

Figure 11.2: Viewpoint 3 (panoramic)

101 The proposed construction materials storage yard is located adjacent to the N2 approximately 2.5km south-west of Carrickmacross with access to the site via the L4700. The 1.42ha site is currently a rough grassland field at approximately 40mAOD with a line of semi-mature trees

along the north eastern boundary with the N2. There is a continuous band of trees and hedgerows along the south western boundary with the L4700.

102 The surrounding landform is characterised by an undulating topography with a mix of drumlins and low lying pastures with intact hedgerow field boundaries. There are patches of mature trees scattered throughout the local landscape and lakes at lower elevations.

103 Referring to the MLCA, the site is located within the Landscape Character Type *Drumlin Farmland* and within the Landscape Character Area *Carrickmacross Drumlin & Lowland Farmland* LCA.

104 There are two *Areas of Secondary Amenity Value* within the local area. Lough Naglack is located approximately 370m from the site, whilst Lisanisk Lake is located a distance of approximately 1.2km from the site. There will be no views of the site from these lakes due to intervening landform and tree cover.

105 From the local access bridge over the N2, approximately 160m north-west of the site, there are clear open views to the south with the N2 occupying a large part of the view with undulating drumlin fields to the south-east and further west. The majority of the site will be visible next to the N2, on lower lying land and partially screened by a band of deciduous trees along the N2. See **viewpoint 4**.

Figure 11.3: Viewpoint 4

106 The higher parts of the stored materials would be visible from the N2, as well as the traffic leaving and entering the site. The existing vegetation along the road, however, provides good screening, which will increase over the three year time period for the site.

107 There are several properties in close proximity to the construction materials storage yard site. On the L4700 to the south there are several properties which face onto the local road. There will be no views of the site from these properties due to the intervening roadside tree cover.

108 There is a property adjacent to the construction materials storage yard site to the east. From the garden of this property there will be open views of the entire construction materials storage yard site, which lies at a slightly lower elevation.

109 **Viewpoint 1** looks towards the site from the L4700 adjacent to this property.

Figure 11.4: Viewpoint 1

110 The L4700 on the western side of the site is parallel to the N2. This local road cuts through a generally enclosed landscape with roadside vegetation and sloping landform on both sides of the road limiting wide views. Travelling along the L4700 adjacent to the site, there will be clear views of a large portion of the site. The new entrance on this road, parking areas and some construction materials would be visible. As the tower materials are to be laid horizontally; and as the site is at a lower elevation than the road, a large portion of the site (including the tower storage to the northern side) will be visible from this road. See **viewpoint 2.**

111 Travelling along this local road in a southerly direction, there will be clear views of the site, including the prefabricated staff offices at the junction with the local road. The site traffic and site entrance will also be clearly visible. Views of the whole site would not be possible due to the screening effect of the site works at the western side of the site.

Figure 11.5: Viewpoint 2 from the L4700

Figure 11.6: Viewpoint 3 from the L4700

112 In the wider landscape there is a network of local roads and farm tracks which do not experience any views of the site due to the undulating drumlin landform and tree cover.

Residual Landscape Effects

113 The grass ground cover will be removed and replaced by compacted hardcore for the duration of use of the site (approximately three years). Boundary hedgerows and tree cover will be retained, (except for those removed to construct the entrance). However, during the construction stage there will be a change in land use and resulting change in landscape character. The site's proximity to a main road and previous use as a construction compound result in landscape effects that are short term and low-moderate. On completion of construction, the site will be reinstated to agriculture, the long term landscape and visual effects will be negligible.

Residual Visual Effects

114 The construction materials storage yard will be partly visible from the N2, and the adjacent L4700. It will be openly visible from the bridge crossing over the N2 and from the garden of the property adjacent to the site. Construction traffic entering and leaving the site will also be visible from these locations. The effects on views from the N2 will be short term and low-moderate considering that views from main roads are considered to be of low sensitivity. The effect on views from the L4700 and adjacent property are more sensitive, and effects on these views would be low-moderate and short term.

11.5.4.8 Potential Impact of Swan Flight Diverters

115 **Chapter 6** of this volume of the EIS contains information on the location, extent and type of swan flight diverters required along the route. These have been illustrated on photomontages at varying viewing distances (see Photomontages 16, 24 and 31).

116 Bird flight diverters will be located:

- Between Towers 196 and 203 in the vicinity of Comertagh and Raferagh Loughs;
- Between Towers 160 and 169 where the alignment passes to the west of Lough Egish and east of Lough Morne; and
- Between Towers 139 and 147 where the alignment passes on higher ground to the east of Ballintra.

117 The requirement for swan flight diverters often corresponds with areas of landscape sensitivity, and these three locations are sensitive due to their proximity to lakes and location on higher parts of the landscape. The swan flight diverters will be visible on the earth wires at close proximity to the proposed development. However, the type of bird flight diverter selected for use is visually subtle and is not perceptible at distances greater than approximately 500m. Therefore, considering the relevant scale of the proposed development, the addition of swan flight diverters is not considered to result in significant landscape or visual effects. The slightly higher visual impact resulting from the swan flight diverters is balanced with the benefits to landscape character arising from bird protection.

11.5.5 Decommissioning

118 The proposed development will become a permanent part of the transmission infrastructure. The expected lifespan of the development is in the region of 50 to 80 years. This will be achieved by routine maintenance and replacement of hardware as required. There are no plans for the decommissioning of the OHL. In the event that part of, or the entire proposed infrastructure is to be decommissioned, all towers, equipment and material to be decommissioned will be removed off site and the land reinstated. Impacts would be expected to be less than during the construction phase and would be of short term duration.

11.6 MITIGATION MEASURES

119 In landscape terms, the best mitigation measure is *'*avoidance' of potential impact by a route selection process that minimises visibility on skylines and proximity to waterbodies and that avoids or minimises excessive proximity or dominance of sensitive visual receptors – such as scenic routes, residences, tourism and leisure amenities and facilities. This has been carried out over the course of constraints evaluation and route selection and is described in The *Final Re-Evaluation Report* (April 2013) (see Appendix 1.2, **Volume 3B Appendices** of this EIS) and The *Preferred Project Solution Report* (July 2013) (see Appendix 1.3, **Volume 3B Appendices** of this EIS).

120 The route selection stage resulted in the avoidance of the parts of the landscape most extensively sensitive to an overhead electricity line. The most sensitive locations along the proposed alignment and the most significant landscape and visual impacts of an OHL have been identified and described.

121 Where it has not been possible to avoid adverse effects on identified specific viewpoints, micro-mitigation is possible through the retention, enhancement or replanting of trees and hedgerows in key locations.

122 The mitigation measures described in detail in **Chapter 6** of this volume of the EIS will serve to minimise physical landscape effects. The key mitigation measures in relation to landscape effects are using existing access routes and gaps in hedgerows, reinstatement of hedgerows and ground vegetation (with similar or better quality planting), protection of retained vegetation, sensitive vegetation pruning methods and monitoring of vegetation establishment. Hedgerows will be maintained to ensure no vegetation is tall enough to potentially interfere with the conductors. Trees will be pollarded to minimise physical landscape effects. Ongoing monitoring will be carried out during construction and inspection and if necessary replacement of reinstated planting will be carried out after construction, over a 24 month period.

123 The mitigation measures outlined in **Chapter 7** of this volume of the EIS will serve to minimise effects on soil and subsequent vegetation establishment. The key mitigation measures in relation to landscape effects are, correct removal, storage and reinstatement of subsoil and topsoil and removal and disposal of soil where not required for reinstatement.

11.7 RESIDUAL IMPACTS

124 As the key mitigation measures when planning a transmission line occur at route selection and line design stage, the residual unavoidable effects are, those that have been described in detail in **Section 11.5** of this volume of the EIS.

125 A summary of the significance of residual effects is given in Table 11.18, **Appendix 11.1, Volume 3C Appendices** of the EIS**.**

126 As visibility of towers is highly influenced by intervening vegetation and buildings, the localised nature of this residual impact may slightly reduce or increase over time as vegetation grows, hedgerows are enhanced or removed and buildings are built.

11.8 INTERRELATIONSHIPS BETWEEN ENVIRONMENTAL FACTORS

127 Other potential impacts related to landscape are described in **Volume 3D** (MSA) of the EIS). This volume of the EIS concentrates on the CMSA. The following chapters of this volume of the EIS are also relevant to the potential for effects on landscape in the CMSA; **Chapter 4** Human Beings – Tourism and Amenity, **Chapter 6** - Flora and Fauna, **Chapter 7** - Soils, Geology and Hydrogeology, **Chapter 9** - Air – Noise and Vibration and **Chapter 14**- Cultural Heritage.

128 Interrelationships between ecological impacts and landscape occur where the removal or trimming of wooded features (including woodlands, hedgerows and treelines) may have adverse effects on both ecology and landscape. The impact on such wooded features has been minimised by, where possible, locating towers away from hedgerows and other wooded

areas. The use of swan flight diverters will slightly increase the visual impact of the alignment at close distances where these have been installed.

129 Soil compaction caused by construction or maintenance can have an adverse effect on localised landscape character and vegetation establishment.

130 The potential impacts on the setting of recognised individual cultural heritage sites are appraised in **Chapter 14** of this volume of the EIS. This chapter appraises potential impact in the context of the broad cultural heritage contained within the landscape, which includes the patterns of human impact over the millennia. This human impact includes agriculture, drainage, transport, utilities and housing.

131 The OHL will be visible from some short sections of the Monaghan Way. This may be perceived as reducing the attractiveness of this route for tourism and amenity purposes, although the adverse effects are localised.

132 Noise that may occur in close proximity to the line can have an adverse effect on landscape character.

11.9 CONCLUSIONS

133 The study area for this appraisal forms part of the extensive farmed drumlin belt which stretches east-west across the island of Ireland. The long history of human habitation and agriculture is reflected in a complex pattern of hedgerows and fields which form part of the story of human influence in counties Monaghan and Cavan and which also includes widespread housing development, farm and commercial buildings, a dense road network and existing utilities infrastructure.

134 The most sensitive features of the area subject to this appraisal are the ridgelines of drumlins, the views from elevated areas and the vicinity of lakes which occur in the lower lying areas. The inhabited rural locations in close proximity to the alignment and road crossings are also sensitive to the changes to landscape character that occur with the construction of a 400 kV transmission line.

135 The MLCA and Cavan CDP have recognised areas sensitive to development in particular the Mullyash Uplands and Highlands of East Cavan. This chapter has also identified other sensitive areas and features including settlements, scenic views, heritage sites, recreation and tourist routes and historic designated landscapes.

136 The agricultural landscape of Monaghan and Cavan is generally robust and has undergone continuous change including road and house building, and introduction of utilities infrastructure while sustaining its underlying character and evident time depth. The scale of the proposed development will, however, result in significant alteration to the landscape character of areas in the near vicinity of the alignment – most noticeably at distances of up to 600 - 800m from the transmission line.

137 Towers and associated infrastructure are dominant in close views (up to 500m) where there is no intervening vegetation or topography, where there are gaps or lower than average roadside vegetation, particularly if they are located on the higher parts of drumlins.

138 At distances of 500m to 1km, towers are still noticeable in the context of a wider landscape. The screening capabilities of vegetation, buildings and topography however, become more effective. The towers are more conspicuous at these distances if sited on higher ground or if the viewing point is elevated, or if the proposed development is seen against the sky.

139 Beyond 1km, it becomes difficult to discern the towers in the landscape, and in most cases the towers are not visible at this distance. Towers are still however, distantly visible if seen traversing higher ground or over very flat ground where there is a gap in intervening vegetation.

140 Over the full length of the proposed development, the residual unavoidable impacts will include adverse effects on landscape character and on unscreened views within 600 - 800m of the alignment. Some areas that are particularly elevated in relation to the line will experience significant effects at distances up to 1km. These effects will be particularly noticeable where the transmission line crosses roads, or where hedgerows are low and/or panoramic views are available.

141 Specific identified sensitive locations along the alignment which will experience residual unavoidable landscape and visual impact include; a plateau and valley close to the jurisdictional border with Northern Ireland including a section of the Monaghan Way, the setting the Fair of Muff, a scenic view east of Shantonagh, the vicinity of a number of small lakes, and most commonly, the locations where towers need to cross drumlins to avoid other constraints.