

LANDSCAPE AND VISUAL IMPACT ASSESSMENT

Magheralin Solar Farm

NI2702
Landscape & Visual Impact
Assessment
Final 06
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REPORT

Quality Management

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1 LANDSCAPE AND VISUAL IMPACT

1.1 Introduction

RPS was commissioned by Renewable Energy Systems Ltd (RES) to undertake a Landscape and Visual Impact Assessment (LVIA) to support a planning application for which seeks permission for the:

“Installation and operation of a 29.9MW solar farm including photovoltaic panels, mounting frames, transformer / inverter units, and on-site substation with associated ancillary development including security fencing, pole mounted CCTV, associated landscaping, internal access tracks, new site access, internal cabling and associated site works.” (The Proposed Development).

The landholding upon which the development is proposed measures c. 64.43 hectares / 159.23 acres.

For ease of reference and to facilitate review, the site is referred to within this Report as being made up of four land-parcels which are located south of Magheralin and southeast of Dollingstown. From north to south lands comprise:

- Parcel 1 – Lands accessing onto Springhill Road, immediately northwest of No.22 Springhill Road, Lurgan and immediately to the rear and northeast of 66, 68 and 70-90 Inn Road, Dollingstown (c. 9.3 ha);
- Parcel 2 – Lands c.300m southeast of 15 Springhill Road, Lurgan, c.240m northwest of 117 New Forge Road, Magheralin, Lurgan, and c.400m east of 64 Dromore Road, Lurgan (c.33.3ha);
- Parcel 3 – Lands c 80m northeast of 102 Dromore Road, Waringstown, and immediately adjacent to and west of 108 Dromore Road (c.9.4ha); and
- Parcel 4 – Lands c.660m southeast of 105 Dromore Road, Donaghcloney and extending south/southeast to c.80m north/northeast of 67 Drumlin Road, Craigavon and c.70m to the rear and south west of 119 Dromore Road, Donaghcloney. (c. 11.5 ha).

Parcels 2 and 3 will be connected via underground cables which will pass through agricultural fields utilising existing agricultural lanes where available. The northernmost land-parcel (Parcel 1) will be connected via an interconnection cable across Springhill Road and intervening agricultural lands and the second interconnection route proceeds northwards from the southern-most land parcel (Parcel 4) across Drumlin Road and through intervening agricultural lands. It is proposed to traverse the River Lagan via horizontal directional drill before crossing Dromore Road to the north, and entering Parcel 3 of the site. The purpose of the interconnecting cables is to transfer energy created from inverter stations to the on-site substation which is located in the centre of the site (Parcel 3). The interconnection cable areas comprise 0.93ha.

The purpose of this LVIA is to identify and determine the effects on landscape character, landscape features, visual receptors, and visual amenity as a result of the works associated with the construction of the Proposed Development.

This assessment has been prepared and reviewed by chartered landscape architects at RPS.

1.2 Methodology

1.2.1 General Approach

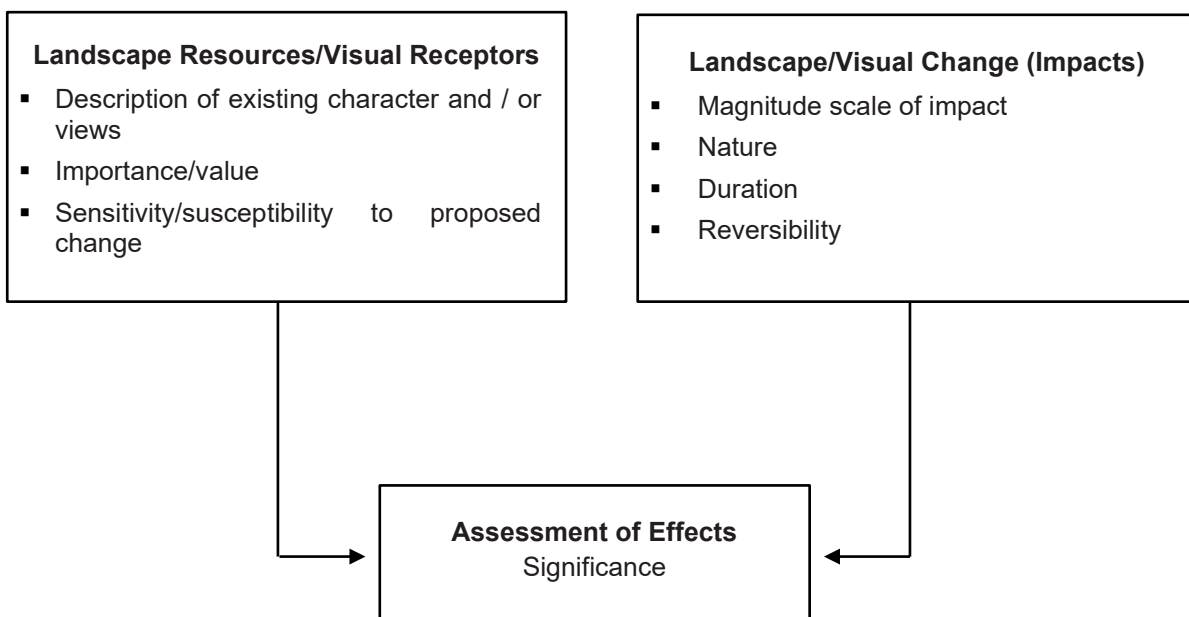
The methodology and approach to the assessment contained within this chapter has been carried out in accordance with best practice guidance described in the following documents;

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (The Landscape Institute and Institute of Environmental Management & Assessment, 2013) (GLVIA3);
- Technical Guidance Note 06/19 Visual Representation of Development Proposals (The Landscape Institute, 2019).

GLVIA3 recommends that an LVIA ‘concentrates on principles and process’ and ‘does not provide a detailed or formulaic ‘recipe’ to assess effects, it being the ‘responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand’ (preface to the third edition).

The effects on the landscape resources and visual receptors (people) have been assessed by considering the proposed change in the baseline conditions (the impact of the development) against the type of landscape resource or visual receptor (including the importance and sensitivity of that resource or receptor). These factors are determined through a combination of quantitative (objective) and qualitative (subjective) assessment using professional judgement. The assessment methodology is summarised in **Figure 1-1** below.

Figure 1-1: Assessment Methodology Summary



The LVIA considers the potential effects of a project upon:

- Individual landscape features and elements;
- Landscape character; and
- Visual amenity and the people who view the landscape.

1.2.2 Identification of Baseline Conditions

Baseline conditions have been identified and assessed through analysis of;

- Up to date digital copies of Ordnance Survey Discovery Series raster and OS vector maps;
- Aerial photography;
- Northern Ireland Regional Landscape Character Assessment (NIRLCA);
- Northern Ireland Landscape Character Assessment 2000 (NILCA);
- Area Development Plans;

- Northern Ireland Environment Agency - Register of Historic Parks, Gardens and Demesne; and
- Drawings of the Proposed Development.

Site visits were undertaken to assess the existing environment, to establish the existing visual resource and to identify sensitive receptors, i.e. residential properties, scenic viewpoints. Site visits were also used to consider the potential effects on landscape character and visual impacts arising as a result of the Proposed Development.

1.2.3 Identifying Effects

Assessing the significance of an effect is a key component of the LVIA and is an evidence-based process combining professional judgement on the nature of a landscape or visual receptor's sensitivity, their susceptibility or ability to accommodate change and the value attached to the receptor. It is important to note that judgements in this LVIA are impartial and based on professional experience and opinion informed by best practice guidance.

The effects of a proposed development are considered to be of variable duration and are assessed as being of either short-term, medium-term or long-term duration, and permanent or reversible. Effects are considered to be long-term during the operational phase of the development, whilst operations and infrastructure works apparent during the construction and initial operating period are considered to be temporary, short-term effects.

The reversibility of an effect is also variable. The effects on the landscape and visual resource that occurs during the construction period such as the use of construction machinery are considered to be reversible.

Where effects arise during the construction period, these are most likely to be as a result of: movement of construction machinery within the landscape; construction of new structures and construction activities within the site boundary all of which are considered to be short term in duration.

To avoid repetition, the duration and reversibility of effects are not reiterated throughout the assessment.

1.2.4 Study Area

Using terrain-modelling techniques combined with the Proposed Development specification a map was created which identified areas from which the Proposed Development may theoretically be visible. This Zone of Theoretical Visibility (ZTV) is the area within which views of the Proposed Development can theoretically be obtained, determined by the topography of the area and is representative of a theoretical worst-case scenario in line with current guidance.

The ZTV forms the basis for the study area associated with the Proposed Development for both landscape and visual impact assessment. It is noted that the ZTV does not consider local features such as; roadside hedgerows, field boundary hedgerows, woodland planting, coniferous forestry or buildings. In practice the actual visibility of the Proposed Development is considerably less in extent than the theoretical one, since individual elements of the proposal are difficult to focus on at long distances and localised changes in topography, hedges, trees and woodland tend to restrict views.

The ZTV was assessed against the elements of the Proposed Development, the footprint of the Proposed Development, the receiving landscape and perceptibility of elements of the Proposed Development particularly when viewed against surrounding topographical changes and vegetation cover. Survey and assessment established that vertical elements associated with the Proposed Development are not easily perceived within the wider landscape due to intervening topographical changes and vegetation cover.

1.2.5 Assessment Criteria

The objective of the assessment process is to identify and evaluate the predicted significant effects arising from a proposed development. Significance is a function of the:

- Sensitivity of the affected landscape or visual receptors, determined through consideration of the susceptibility of the receptor to the type of change arising from the specific proposals and the value attached to the receptor; and
- Secondly its Scale or Magnitude, derived from a consideration of the size/ scale, geographical extent, duration, and reversibility of the proposed development.

These definitions recognise that landscapes vary in their capacity to accommodate different forms of development according to the nature of the receiving landscape and the type of change being proposed.

As with any new development, it is acknowledged that, the introduction of a proposed development into the existing landscape or visual context could cause either a deterioration, improvement or neutral impact on the existing landscape or visual resource.

1.2.6 Landscape Impact Assessment

The LVIA firstly assesses how a proposed development would impact directly on any landscape features and resources. This category of effect relates to specific landscape elements and features (e.g. woods, trees, walls, hedgerows, watercourses) that are components of the landscape that may be physically affected by the proposed development, such as the removal or addition of trees and alteration to ground cover.

The LVIA then considers impacts on landscape character at two levels. Firstly, consideration is given to how the landscape character is affected by the removal or alteration of existing features and the introduction of new features. This is considered to be a direct impact on landscape character.

Secondly, the indirect impacts of a proposed development on the wider landscape are considered. The assessment of impacts on the wider landscape is discussed using the surrounding character areas identified in the relevant landscape character assessments. It is acknowledged there is an overlap between perception of change to landscape character and visual amenity, but it should be remembered that landscape character in its own right is generally derived from the combination and pattern of landscape elements within the view.

The significance of effects on landscape features and character is determined by considering both the sensitivity of the feature or landscape character and the magnitude of impact.

Consideration of the sensitivity of the landscape resource against the magnitude of impact caused by the proposed development is fundamental to landscape and visual assessment and these two criteria are defined in more detail below.

1.2.7 Landscape Sensitivity

The determination of the sensitivity of the landscape receptor is based upon an evaluation of the elements or characteristics of the landscape likely to be affected. The evaluation reflects such factors as its quality, value, contribution to landscape character and the degree to which the particular element or characteristic can be replaced or substituted.

GLVIA 3 at paragraph 5.39 states that *'landscape receptors need to be assessed firstly in terms of their sensitivity, combining judgments of their susceptibility to the type of change or development proposed and the value attached to the landscape.*

Susceptibility is defined by GLVIA 3 at paragraph 5.40 as *'the ability of the landscape receptor (whether it be the overall character or quality/ condition of a particular landscape type or area, or an individual element and/*

or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without due consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies’.

The value of a landscape receptor is determined with reference to the presence of relevant landscape designations, such as Areas of Outstanding Natural Beauty (AONB) and their level of importance. For the purpose of this assessment, landscape value is categorised as:

- Very High: Areas of landscape acknowledged through designation such as AONB or other landscape based sensitive areas. These are of landscape significance within the wider region or nationally;
- High: Areas that have a very strong positive character with valued and consistent distinctive features that gives the landscape unity, richness, and harmony. These are of landscape significance within the district;
- Medium: Areas that exhibit positive character, but which may have evidence of alteration/degradation or erosion of features resulting in a less distinctive landscape. These may be of some local landscape significance with some positive recognisable structure; and
- Low: Areas that are generally negative in character, degraded and in poor condition. No distinctive positive characteristics and with little or no structure. Scope for positive enhancement.

As previously discussed, landscape sensitivity is influenced by a number of factors including susceptibility to change, value and condition. In order to assist with bringing these factors together judgements regarding susceptibility and value have been used which define the landscape resource as being either, negligible, low, medium, high or very high. **Table 1** defines the criteria that have guided the judgement as to the overall sensitivity of the Landscape Resource.

Assessments of susceptibility and value of a particular landscape resource may be different and professional judgement will always be used to conclude on the judgement of sensitivity. For example, value may be high and susceptibility may be low, and a professional judgement will be made to determine whether sensitivity is high, low or in between, supported by narrative explanation.

Table 1: Landscape Sensitivity

Definition		Sensitivity
Landscape resource susceptibility	Landscape resource value	
Exceptional landscape quality, no or limited potential for substitution. Key elements / features well known to the wider public. Little or no tolerance to change	Nationally / internationally designated/ valued landscape, or key elements or features of national/ internationally designated landscapes. Little or no tolerance to change	Very High
Strong/ distinctive landscape character; absence of landscape detractors. Low tolerance to change.	Regionally/ nationally designated/ valued countryside and landscape features. Low tolerance to change.	High
Some distinctive landscape characteristics; few landscape detractors.	Locally' regionally designated/ valued countryside and landscape features.	Medium

Definition		Sensitivity
Landscape resource susceptibility	Landscape resource value	
Medium tolerance to change.	Medium tolerance to change.	
Absence of distinctive landscape characteristics; presence of landscape detractors. High tolerance to change	Undesignated countryside and landscape features. High tolerance to change	Low
Absence of positive landscape characteristics. Significant presence of landscape detractors. High tolerance to change	Undesignated countryside and landscape features. High tolerance to change	Negligible

1.2.8 Magnitude of Landscape Effect

The effect on landscape receptors and the overall judgement of the magnitude of landscape effect is based on combining judgements on ‘size or scale, the geographic extent of the area influenced, and its duration and reversibility’ (GLVIA3, paragraph 5.48),

Direct resource changes on the landscape character in the study area are brought about by the introduction of a proposed development and its impact on the key landscape characteristics. Judgements regarding the magnitude of landscape impact are indicated in **Table 2** below.

Table 2: Magnitude of Landscape Impact

Definition	Magnitude of Impact
Total loss or addition or/ very substantial loss or addition of key elements / features / patterns of the baseline, i.e., pre-development landscape and/ or introduction of dominant, uncharacteristic elements with the attributes of the receiving landscape	Large
Partial loss or addition of or moderate alteration to one or more key elements / features / patterns of the baseline, i.e., pre-development landscape and / or introduction of elements that may be prominent but may not necessarily be substantially uncharacteristic with the attributes of the receiving landscape.	Medium
Minor loss or addition of or alteration to one or more key elements / features / patterns of the baseline, i.e., pre-development landscape and or introduction of elements that may not be uncharacteristic with the surrounding landscape.	Small
Very minor loss or addition of or alteration to one or more key elements / features / patterns of the baseline, i.e., pre-development landscape and/or introduction of elements that are not uncharacteristic with the surrounding landscape approximating to a 'no-change' situation.	Negligible
No loss, alteration or addition to the receiving landscape resource	No change

1.2.9 Visual Impact Assessment

As outlined in GLVIA 3 (Paragraph 6.1) ‘An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity’. The assessment of effects on views is an assessment of how the introduction of a proposed development will affect views within the study area. The Assessment of visual effects therefore needs to consider:

- Direct impacts of a proposed development upon views of the landscape through intrusion or obstruction;
- The reaction of viewers that may be affected, e. g. residents, walkers, road users; and
- The overall impact on visual amenity.

1.2.10 Sensitivity of Visual Receptors

For visual receptors, judgements of susceptibility and value are closely interlinked. For example, the most valued views are likely to be those which people go and visit because of the available view. The value attributed to visual receptors also relates to the value of the view – for example a National Trail is nationally valued for its access, not necessarily for its views.

Paragraph 6.32 of the GLVIA refers to the susceptibility of different visual receptors to changes in views and states that susceptibility is mainly a function of “the occupation or activity of different people experiencing the view at particular locations” and “the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations.”

Other factors affecting visual sensitivity include:

- The location and context of the viewpoint;
- The expectations and occupation or activity of the receptor; and
- The importance of the view.

Judgements on the overall visual sensitivity/ susceptibility are provided in **Table 3** below and overall sensitivity of the visual resource is based on combining judgements on the sensitivity of the human receptor (for example resident, commuter, tourist, walker, recreationist or worker, and the numbers of viewers affected) and judgements on the visual resource value (for example views experienced from residential properties, workplace, leisure venue, local beauty spot, scenic viewpoint, commuter route, tourist route or walkers’ route).

Table 3: Visual Resource Sensitivity

Definition		Sensitivity
Visual resource Susceptibility	Visual resource value	
Views of remarkable scenic quality, of and within internationally designated landscapes or key features or elements of nationally designated landscapes that are well known to the wider public. Little or no tolerance to change.	Observers, drawn to a particular view, including those who have travelled to experience the views. Little or no tolerance to change	Very High
Views from residential property. Public rights of way, National Trails, Long distance walking routes and nationally designated countryside/	Observers enjoying the countryside from their homes or pursuing quiet outdoor recreation are more sensitive to visual change.	High

Definition		Sensitivity
Visual resource Susceptibility	Visual resource value	
landscape features with public access. Low tolerance to change.	Little tolerance to change	
Views from local roads and routes crossing designated countryside / landscape features and 'access land' as well as promoted paths. Medium Tolerance to change.	Observers enjoying the countryside from vehicles on quiet/ promoted routes are moderately sensitive to visual change. Medium tolerance to change	Medium
Views from workplaces, main roads and undesignated countryside / landscape features. High tolerance to change.	Observers in vehicles or people involved in frequent or infrequent repeated activities are less sensitive to visual change. High tolerance to change	Low
Views from within and of undesignated landscapes with significant presence of landscape detractors. High tolerance to change.	Observers in vehicles or people involved in frequent or frequently repeated activities are less sensitive to visual change. High tolerance to change	Negligible

1.2.11 Magnitude of Visual Effects

The magnitude of impact on the visual resource results from the scale of change in the view, with respect to the loss or addition of features in the view, and changes in the view composition. Important factors to be considered include: proportion of the view occupied by a proposed development, distance and duration of the view. Other vertical features in the landscape and the backdrop to the proposed development will all influence resource change. Judgements regarding the magnitude of visual impact are provided in **Table 4** below.

Table 4: Magnitude of Visual Impact

Definition	Magnitude
Complete or very substantial change in view dominant involving complete or very substantial obstruction of existing view or complete change in character and composition of baseline, e.g., through removal of key elements	Large
Moderate change in view: which may involve partial obstruction of existing view or partial change in character and composition of baseline, i.e., pre-development view through the introduction of new elements or removal of existing elements. Change may be prominent but would not substantially alter scale and character of the surroundings and the wider setting. Composition of the view would alter. View character may be partially changed through the introduction of features which, though uncharacteristic, may not necessarily be visually discordant	Medium
Minor change in baseline, i.e., pre-development view - change would be distinguishable from the surroundings whilst composition and character would be similar to the pre change circumstances.	Small

Definition	Magnitude
Very slight change in baseline, i.e., pre-development view - change barely distinguishable from the surroundings. Composition and character of view substantially unaltered.	Negligible
No alteration to the existing view	No change

1.2.12 Significance of Effects

The purpose of this LVIA is to determine, in a transparent way, the likely significant landscape and visual effects of the Proposed Development. It is accepted that, due to the nature and scale of development, the Proposed Development could potentially give rise to some notable landscape and visual effects.

GLVIA3 identifies that ‘..... a final judgment is made about whether or not each effect is likely to be significant. There are no hard and fast rules about what effects should be deemed ‘significant’ but LVIA’s should always distinguish clearly between what are considered to be significant and non-significant effects’.

Significance can only be defined in relation to each particular development and its specific location. The relationship between receptors and effects is not typically a linear one. It is for each LVIA to determine how judgements about receptors and effects should be combined to derive significance and to explain how this conclusion has been arrived at.

The identification of significant effects would not necessarily mean that the effect is unacceptable in planning terms. What is important is that the likely effects on the landscape and visibility are transparently assessed and understood in order that the determining authority can bring a balanced, well-informed judgement to bear when making the planning decision.

The significance of effects on landscape, views and visual amenity have been judged according to a six-point scale: Substantial, Major, Moderate, Minor, Negligible or None as presented in **Table 5** below, which contains a description of the Significance of Effect Criteria.

Table 5: Significance of Effect Criteria

Significance of Effect	Landscape Resource	Visual Resource
None	Where the project would not alter the landscape character of the area.	Where the project would retain existing views.
Negligible	Where proposed changes would have an indiscernible effect on the character of an area.	Where proposed changes would have a barely noticeable effect on views/visual amenity.
Minor	Where proposed changes would be at slight variance with the character of an area.	Where proposed changes to views, although discernible, would only be at slight variance with the existing view.
Moderate	Where proposed changes would be noticeably out of scale or at odds with the character of an area.	Where proposed changes to views would be noticeably out of scale or at odds with the existing view.
Major	Where proposed changes would be uncharacteristic and/or would significantly alter a valued aspect of (or a high quality) landscape.	Where proposed changes would be uncharacteristic and/or would significantly alter a valued view or a view of high scenic quality.

Significance of Effect	Landscape Resource	Visual Resource
Substantial	Where proposed changes would be uncharacteristic and/or would significantly alter a landscape of exceptional landscape quality (e.g., internationally designated landscapes), or key elements known to the wider public of nationally designated landscapes (where there is no or limited potential for substitution nationally).	Where proposed changes would be uncharacteristic and/or would significantly alter a view of remarkable scenic quality, within internationally designated landscapes or key features or elements of nationally designated landscapes that are well known to the wider public.

For the purposes of this assessment those effects indicated, in **Table 6** below, as being Substantial or Major to Substantial are regarded as being significant. Effects of 'Minor to Moderate' and lesser significance have been identified within the assessment, though are not considered significant. For those effects indicated as being of 'Moderate' or 'Moderate to Major' the assessor has exercise professional judgement in determining if the effect is considered to be significant, taking account of site specific or location specific variables which are given different weighting in each instance according to location.

Table 6: Significance of effects matrix

Magnitude of Impact	Sensitivity				
	Negligible	Low	Medium	High	Very High
No Change	No Change	No Change	No Change	No Change	No Change
Negligible	Negligible	Negligible to Minor	Negligible to Minor	Minor	Minor
Small	Negligible to Minor	Negligible to Minor	Minor	Minor to Moderate	Moderate to Major
Medium	Negligible to Minor	Minor	Moderate	Moderate to Major	Major to Substantial
Large	Minor	Minor to Moderate	Moderate to Major	Major to Substantial	Substantial

A conclusion that an effect is 'significant' should not be taken to imply that the Proposed Development is unacceptable. Significance of effect needs to be considered with regard to the scale over which it is experienced and whether it is beneficial or adverse.

1.3 Receiving Environment

1.3.1 General Overview

The Proposed Development is located across 4 portions of land at locations described in the introduction above.

The northern portion (Parcel 1) of the Proposed Development is located to the immediate south-east of Dollingstown, bounded along its southern extent by Springhill Road with residential and industrial development adjacent to the Inn Road forming the western and northern boundaries. Field patterns within this portion are comprised of medium scale agricultural fields utilised for arable purposes. Boundaries to this portion of the Proposed Development are well defined by existing vegetation, with hedgerows, shrub cover and mature trees

forming a strong sense of enclosure and partially screening the site from within the surrounding landscape. Landform associated with this northern portion is gently undulating in nature with land generally falling towards the western boundary. Roadside vegetation adjacent to Springhill Road forms a well-defined boundary to this portion of the development Site.

Lands associated with the central portion (Parcel 2) of the Proposed Development site are comprised of a number of gently undulating agricultural fields of primarily medium scale, which are primarily utilised for grazing and arable purposes. Field boundaries are well defined by hedgerows, hedgerows with scattered mature trees and timber post and wire fences. The larger central portion is set well back from adjacent transport corridors, with visibility of the Proposed Development Site partially screened by a combination of intervening topography and field boundary hedgerows. Southern boundaries of this portion are well defined by woodland planting along the northern bank of the River Lagan, and existing field boundary hedgerows. Eastern boundaries are set well back from the adjacent Acres Road, with boundaries defined by hedgerows with scattered mature trees, whilst remaining boundaries to the west and north of the parcel of land are also well defined by hedgerows and mature trees.

A small central portion (Parcel 3) is located to the immediate east and south of Dollingstown FC grounds, to the east of Dromore Road, and boundaries are well defined by hedgerows with scattered mature trees. Fields within this portion are generally of a medium to large scale and utilised for arable pastoral purposes.

The southern portion (Parcel 4) of the Proposed Development lies approximately 2km east of Waringstown, bounded to the west by the B9 (Drumlin Road) and to the east by the Dromore Road. Lands forming this portion of the Proposed Development are comprised of a single, large scale agricultural field which is generally flat in nature. Roadside hedgerows and field boundary hedgerows partially restrict visibility of this portion from within the wider landscape.

Scattered residential development follow existing road networks, with larger clusters of residential development located at road intersections, with main development areas located at Waringstown, Dollingstown, Magheralin and Lurgan. Larger scale industrial units are located within proximity to the larger areas of development and increase the presence of development locally. Timber poles carrying overhead cables traverse the site, adding verticality within the landscape associated with the Proposed Development site.

1.3.2 Northern Ireland Regional Landscape Character Assessment

In recognising the importance of sustaining regional identity, the Northern Ireland Environment Agency (NIEA), commissioned the Northern Ireland Regional Landscape Character Assessment (NIRLCA), which resulted in the identification of distinct regional character areas within Northern Ireland.

The assessment provides a strategic overview of the Northern Ireland landscape and subdivides the countryside into 26 Regional Landscape Character Areas (RLCAs) based upon information on people and place and the combinations of nature, culture and perception which make each part of Northern Ireland unique and has been developed to meet commitments set out in Northern Ireland's Landscape Charter.

A review of the NIRLCA indicates that the Proposed Development is located across two RLCAs namely: RLCA 14 – Lough Neagh Basin and RLCA 22 – Down Drumlins and Holywood Hills.

Lough Neagh Basin - RLCA 14

The most northerly portion of the Proposed Development is partially located within this RLCA and the key characteristics identified from the NIRLCA are as follows;

- *Flat, expansive, large scale basin surrounding Lough Neagh, the largest freshwater body in Britain and Ireland.*

- *Farmland, drumlins, and peat dominate the landscape to the south and the land has been extensively modified following peat extraction in the southwest.*
- *The lough and the surrounding area are steeped in legend and history, which are often associated with the ruins in this area, such as Shane's Castle to the north.*
- *The lough is well-used for water-based recreation, including boating, angling, and birdwatching.*
- *Major roads do not pass close to the lough due to hydrology. As such the lough fringes are relatively tranquil in many places, with only small settlements on the shore.*
- *Transition from typical wetland vegetation of fen, rushes, willow, and other marshy habitats near the lough to medium-small scale fields, particularly to the east.*

The RLCA 14 within the vicinity of the Proposed Development is described *"The lough fringes include high quality farmland as well as development, including the settlements of Lurgan, Craigavon and Portadown, the M1 motorway and the International Airport. The large scale landform of the basin is overlain by medium scale farmland. The landscape around the lough is generally rural, with areas of wetland semi-natural habitat including fens, wet grassland, and carr, giving way to a mixed farmland landscape, with drumlins found to the west and south. Settlements and roads are set on higher, better drained land around the basin, and the lough shores are not generally settled. Restoration works along the lough shore are focussed on environmental improvements and are not generally tourism related."*

Down Drumlins and Holywood Hills – RLCA 22

The majority of the Proposed Development is located within this RLCA and key characteristics identified in the NIRLCA are as follows;

- *A drumlin-dominated lowland pasture landscape with hedges and infrequent hedgerow trees.*
- *A regular distribution of small market towns, including Ballynahinch and Dromore, across the drumlin landscape.*
- *Farms and dwellings densely scattered throughout the landscape, becoming more isolated on the higher ground of the Holywood Hills.*
- *Scale of landscape and views varies with elevation in relation to drumlins, with a sense of a large-scale landscape when at the tops of the drumlins compared to a more intimate scale when between the drumlins.*
- *Watercourses meandering between drumlins flow through biodiverse marshy or flooded inter drumlin areas.*

The RLCA 22 within the vicinity of the Proposed Development is described *"The Down Drumlins and Holywood Hills form part of the extensive drumlin field that extends across Armagh and Down, with an almost continuous covering of drumlins. The area takes in rural lowland with subtle underlying relief including the upper Lagan Valley and the River Ravarnet valley, as well as the undulating Castlereagh Hills and Holywood Hills, which rise to 200m. To the south, Slieve Croob and the Mourne Mountains rise dramatically out of the undulating lowland and form a distinctive backdrop to views across much of this area. This area is crossed by a number of main roads connecting the small market towns which are distributed across the landscape. Other roads of smaller scale form a sinuous network responding to the drumlin landforms. Drumlins dominate the area, except on the upland pastures of the Holywood Hills and Castlereagh Hills. Within the upper Lagan River valley to the south of Dromore and the River Ravarnet valley between Ballynahinch and Lisburn, the drumlins are small and separated by lowland bogs. There are scattered hedgerow trees, trees associated with farmsteads and areas of scrub, giving a wooded character to this rural area. Land use is mixed, reflecting variations in drainage and topography, and dispersed properties form clusters at road junctions on drumlin tops. Views are often short due to the topography and tree cover, but longer views are possible from drumlin tops."*

1.3.3 Northern Ireland Landscape Character Assessment 2000

The Northern Ireland Landscape Character Assessment 2000 (NILCA 2000) contains landscape briefs for each of the 130 landscape character areas in Northern Ireland surveyed in 1999. It provides a baseline description of the landscape at a point in time based upon local patterns of geology, landform, land use, cultural and ecological features. This base information is still a valuable resource and has informed the 26 regional landscape character areas of the NIRLCA. However, there has been substantial development in both rural and urban areas of Northern Ireland since the NILCA 2000 was surveyed which has impacted on many of its local landscape character areas.

A review of the NILCA 2000 indicates that the Proposed Development is located within two Landscape Character Areas (LCA); Donaghcloney Valley LCA (80) and Upper Ballinderry Plateau LCA (109); and immediately adjacent to Craigavon Plateau LCA (79), (refer to Appendix A; Figure 1.3).

Craigavon Plateau LCA (79)

The key characteristics, identified by NIEA, of the LCA are as follows:

- Undulating plateau, with steeper slopes on the edges of the Donaghcloney Valley and the Upper Bann valley.
- Small, winding, steep-sided valleys on the southern slopes of the plateau.
- Varied landscape pattern, with pasture, paddocks and small-holdings, as well as some larger farms and estates.
- Numerous hedgerows and roadside trees.
- Extensive recent urban and infrastructure development, particularly on the periphery of the larger villages and the urban fringe.
- Prominent churches are local landmarks.

NIEA state; *“The landscape is characterised by a relatively small-scale pattern of fields bounded by hedgerows, hedgerow trees, rural roads and roadside ash, beech, oak, and scattered conifers. Other tree species include sweet chestnut and poplar. The continuity of the landscape pattern is broken by the A26 and B3 roads and by extensive, scattered residential and roadside development in some areas. However, substantial pockets of relatively tranquil, rural landscape remain and there are many stone walls, gate posts, stone bridges, and some thatched cottages. Church spires are often local landmarks, but the character of most settlements, such as Bleary and Waringstown, is dominated by extensive new housing estates and scattered peripheral development. Land uses include pasture, horse grazing, horticulture (including some orchards) and small blocks of mixed woodland.”*

In relation to the Proposed Development site, the sensitivity of the landscape is generally low, however, the steeper slopes on the margins of the River Bann and the Lagan valley are more visible and therefore more sensitive.

Donaghcloney Valley LCA (80)

The key characteristics, identified by NIEA, of the LCA are as follows:

Broad, flat-bottomed valley with a meandering, narrow river channel.

- Large, geometric fields divided by low hedgerows.
- Scattered hedgerow trees and a fairly open character.
- Rural character but with some large-scale industrial and agricultural development.
- Scattered farms and villages along straight rural roads and larger clustered villages.

- Mix of pasture and arable farmland.
- Stone mill buildings and stone bridges are local landmarks.

NIEA state; *“The Donaghcloney Valley is at the head of the broad River Lagan valley. It is a broad, flat-bottomed valley which lies between the Upper Ballinderry Plateau to the north and the Kilwarlin Plateau to the south. The River Lagan meanders tightly at the entrance to the broader valley to the north east and is a prominent focus in views. It occupies a small channel, but its visual presence is emphasised by stream-side willows and the historic remnants of water mills near the head of the valley. Here, there is a broad field pattern, with long views across open meadows. Towards the outer margins of the valley, the field pattern is generally smaller in scale and the landscape more enclosed. The principal settlement of Magheralin has a clustered form. It is surrounded by open arable farmland, although the river corridor has a relatively small-scale landscape pattern, with some prominent lines of mature trees. The roads are generally straight and ribbon development, which is often associated with conifer shelterbelts, is particularly evident along the B9. There are a number of large agri-industrial buildings within the valley, and many are built from prominent, reflective materials.”*

In relation to the Proposed Development site, the relatively open character and flat landform of this landscape ensures that it is sensitive to change. It is also overlooked in views from adjacent higher land. The centre of the valley is most prominent and therefore particularly sensitive.

Upper Ballinderry Plateau LCA (109)

The key characteristics, identified by NIEA, of the LCA are as follows:

- Rolling farmland landscape, with numerous hedgerow trees and copses.
- Relatively large farmsteads and many estates.
- Steeper escarpment slope on the southern margin of the plateau, overlooking the Broad Lagan Valley.
- Scattered pattern of farms and houses, with nuclear villages and relatively little linear development.
- Beech avenues and dense stands of mature trees, particularly in estate landscapes.
- Large-scale developments - a prison and poultry farm - are prominent on flatter land to the north of Maghaberry.

NIEA state; *“The area has a different landownership pattern to the upper plateau, with fewer larger farmsteads and many estates. There are consequently fewer roads, and the built development has a more clustered character, with houses concentrated into nuclear villages, often with grand avenues of beech trees and prominent churches. Views are generally short or contained on the horizon lines of the many hollows by avenue, roadside or hedgerow planting. The field pattern is quite small scale over much of the area but opens out towards the urban edge of Lurgan, where several factories have been built. There are numerous hedgerow trees and a consistent patchwork of fields and hedgerows. The field pattern varies; fields are always geometric in shape and are generally medium to large in size but there are also pockets of small-scale farmland and paddocks, particularly on the fringes of settlements. Avenues and stands of beech trees, church spires and the glimpsed views of large farmsteads and country houses are important local landmarks.”*

In relation to the Proposed Development site, the areas which are most sensitive to change are on the southern margins of the plateau, particularly on the steep slopes of Friar's Glen and on the slopes to the south of Maghaberry, which overlook the Lagan Valley.

1.4 Landscape Designations

This section reviews relevant landscape designations in Northern Ireland. A brief explanation of these has been given below:

Areas of Outstanding Natural Beauty (AONB)

These are designated either under the Amenity Lands Act (Northern Ireland) 1965 or the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985. They cover huge areas of land, embracing a range of landscape types including limestone cliffs, sweeping moorlands and important geological landforms. They also include farmland, forest, lakes, coastline, and settlement. They are generally subject to planning conditions.

The Proposed Development is not located within close proximity to any AONBs, and as such this designation is not carried forward for further assessment.

Historic Parks and Gardens

Country houses, some of which are listed buildings, set in landscaped parkland or within demesnes, are an important part of the landscape. NIEA has identified a number of these parks, gardens, and demesnes that it considers represents a significant historic and landscape resource. Any development that is likely to have an adverse impact on the planned layout, including views in and out of quality or character of these areas will normally be refused planning permission.

There are two Historic Parks and Gardens (HPG) located in close proximity to the Proposed Development site.

The closest HPG is Brownlow House, which is approximately 1.85km northwest of the Proposed Development site. Despite the Proposed Development being located in close proximity to this HPG, site survey and assessment has established that due to mature tree planting, intervening topographical changes and heavy built form lying between the HPG and the Proposed Development site, the HPG does not have any visual interaction with the Proposed Development and is therefore not predicted to experience any significant effects as a consequence of the Proposed Development. As such the HPG has not been carried forward for further assessment.

The second HPG is Waringstown House, which is approximately 2.5km southwest of the Proposed Development site. Site survey and assessment has established that due to mature tree planting, well vegetated boundaries and intervening topographical changes between the HPG and the Proposed Development, the site does not have any visibility of the Proposed Development and is therefore not predicted to experience any significant effects as a consequence of the Proposed Development. As such the HPG has not been carried forward for further assessment.

The Ulster Way

The Ulster Way is a nationally recognised long-distance footpath that was designated under the Access to the Countryside (NI) Order 1983. The Ulster Way is protected and maintained by the relevant District Councils through which it passes and is promoted as a national walking route by the Northern Ireland Tourist Board.

The Proposed Development is not located near any designated Ulster Way footpath.

Way Marked Trails

There is no way marked walking trail within the study area in close proximity to the Proposed Development.

1.5 Proposed Development

The Proposed Development comprises the construction and operation of a solar farm with a proposed capacity of 29.9MW. Key project components are listed in the bullet points below and are described in greater detail within subsequent text:

- Photovoltaic (PV) Solar Panels erected on steel/aluminium frames set out in south facing arrays;
- 1 on Primary 33kV Sub-station typically measuring 10.34 x 5.7`m x 6.45m h and a solar control building 8.3m x 3.45 x 4m;

- 9 No. Inverter Substations typically comprises of inverter measuring 5 x 3 x 2.5m and a transformer typically measuring 4x 3 x 2.5m to be located across the site;
- Perimeter post and wire “deer-style” security fencing (2.4m high);
- A number of strategically located CCTV security cameras (3.5m high);
- New or upgraded access points onto Dromore Road (Parcel 2), Drumlin Road (Parcel 3), and Springhill Road (Parcel 1);
- Associated internal service tracks;
- Internal and interconnecting underground cabling; and
- Temporary construction compounds.

The proposal will have an operational lifespan of 40 years after which it will be fully decommissioned with the exception of the NIE substation. Proposed planting which would be established within the landscape at that time will be left untouched.

When operational the site will support a dual renewable/farming use and the overwhelming land area will remain agricultural. Sheep grazing will take place across the entire area and will not be impeded by the proposed infrastructure.

1.6 Landscape Effects

The assessment of landscape effects follows the methodology previously described in Section 1.2 and considers those effects which are predicted to occur during the construction and operational phases of the Proposed Development.

In order to avoid repetition, an assessment of construction phase impacts and predicted operational phase impacts is included within the following landscape assessments.

1.6.1 Description of the Sources of Impact

The assessment of landscape effects follows the methodology previously described in Section 1.2 and considers those effects which are predicted to occur during the construction and operational phases of the Proposed Development.

The assessment of construction phase effects relates to the following identified activities:

- Construction works associated with the formation of the solar farm, substation, inverters and associated infrastructure development;
- Delivery of materials to working areas; and
- Localised site clearance and reinstatement.

The construction phase of the Proposed Development will result in additional built elements being introduced into the landscape. The operational phase of the Proposed Development will result in new built form being visible within the surrounding landscape.

An assessment of the predicted landscape impacts during both construction and operation is provided in the following tables and has been based upon the susceptibility and sensitivity of the landscape character as described within the NILCA 2000 assessment, rather than the RLCA as descriptions contained within the NILCA 2000 are considered to be more appropriate at a local level.

1.6.2 Landscape Character Effects

A review of the NIRLCA indicates that the Proposed Development is in two RLCAs namely: RLCA 14 – Lough Neagh Basin and RLCA 22 - Down Drumlins and Holywood Hills.

Lough Neagh Basin – RLCA 14

The landscape around the lough is generally rural, with areas of wetland semi-natural habitat including fens, wet grassland, and carr, giving way to a mixed farmland landscape, with drumlins found to the west and south. Peatlands are also located on the southwestern shores of the Lough, from which peat is being harvested. Settlements and roads are set on higher, better drained land around the basin, and the lough shores are not generally settled. Restoration works along the lough shore are focussed on environmental improvements and are not generally tourism related.

Susceptibility of this RLCA to the type of development proposed is judged to be high as elements of the Proposed Development are considered to create new, visible features in the landscape which can impact on rural quality. The NIRLCA identifies the value of Lough Neagh as an Area of Special Scientific Interest and Special Protection Area, however, the Proposed Development site is not close enough to these sites to have a negative impact. The value of the RLCA is judged to be high.

Overall, taking into account the susceptibility and value attached to the RLCA, the sensitivity of this RLCA is judged to be high.

Construction phase operations associated with the Proposed Development and related infrastructure will have a localised, short-term impact on the RLCA as localised portions of the landscape and site are disturbed during the construction phase. Construction traffic may become more apparent on local roads, but construction traffic movements will remain closely associated with traffic movements on the extensive and busy local road network in the surrounding area with little noticeable change.

During the operational phase, the Proposed Development will be perceived as a minor addition to this extensive RLCA.

The predicted magnitude of change in the landscape resource is considered to be localised and small during the construction phase on this extensive RLCA.

The predicted magnitude of change in the landscape resource is considered to be small during the operational phase on this extensive RLCA.

The predicted significance of landscape effect for RLCA 14 during the construction phase is localised, minor, adverse, temporary in duration and assessed as not significant.

The predicted significance of landscape effect for RLCA 14 during the operational phase is minor and not significant as predicted effects are limited in extent by the enclosing nature of the surrounding field boundary vegetation, localised changes in topography, and localised instances of built form in the surrounding landscape. The Proposed Development is considered to be hard to perceive within the wider RLCA as a result of the well vegetated landscape surrounding the Proposed Development.

Down Drumlins and Holywood Hills – RLCA 22

The area takes in rural lowland with subtle underlying relief including the upper Lagan Valley and the River Rarnet valley, as well as the undulating Castlereagh Hills and Holywood Hills, which rise to 200m. To the south, Slieve Croob and the Mourne Mountains rise dramatically out of the undulating lowland and form a distinctive backdrop to views across much of this area.

Susceptibility of this RLCA to the type of development proposed is judged to be high as elements of the Proposed Development are considered to create new, visible features in the landscape which can impact on rural quality. The NIRLCA identifies three Areas of Special Scientific Interest in this RLCA and Aughnadarragh

Lough, which is a Special Area of Conservation. However, the Proposed Development site is not close enough to these sites to have a negative impact. The value of the RLCA is judged to be high.

Overall, taking into account the susceptibility and value attached to the RLCA, the sensitivity of this RLCA is judged to be high.

Construction phase operations associated with the Proposed Development and related infrastructure will have a localised, short-term impact on the RLCA as localised portions of the landscape and site are disturbed during the construction phase. Construction traffic may become more apparent on local roads, but construction traffic movements will remain closely associated with traffic movements on the extensive and busy local road network in the surrounding area with little noticeable change.

During the operational phase, the Proposed Development will be perceived as a minor addition to this extensive RLCA.

The predicted magnitude of change in the landscape resource is considered to be localised and small during the construction phase on this extensive RLCA.

The predicted magnitude of change in the landscape resource is considered to be small during the operational phase on this extensive RLCA.

The predicted significance of landscape effect for RLCA 22 during the construction phase is localised, minor, adverse, temporary in duration and assessed as not significant.

The predicted significance of landscape effect for RLCA 14 during the operational phase is minor and not significant as predicted effects are limited in extent by the enclosing nature of the surrounding field boundary vegetation, localised changes in topography, and localised instances of built form in the surrounding landscape. The Proposed Development is considered to be hard to perceive within the wider RLCA as a result of the well vegetated landscape surrounding the Proposed Development.

A review of the NILCA 2000 indicates that the Proposed Development is located within two Landscape Character Areas (LCA); Donaghcloney Valley LCA (80) and Upper Ballinderry Plateau LCA (109); and immediately adjacent to Craigavon Plateau LCA (79), (refer to Appendix A; Figure 1.3 LCA Map).

Craigavon Plateau LCA (79)

NIEA has stated that in this LCA 79, the landscape is characterised by a relatively small-scale pattern of fields bounded by hedgerows, hedgerow trees, rural roads and roadside ash, beech, oak, and scattered conifers. Further to this, NIEA also state that the quality and condition of the landscape is mixed, a result of the influence of the urban fringe and the associated wide range of land uses.

Susceptibility of this LCA to the type of development proposed is judged to be medium. While the sensitivity of this plateau landscape is generally low, the steeper slopes on the margins of the River Bann and the Lagan valley are more visible and therefore more sensitive. However, due to separation distances, the Proposed Development site will not have an impact on the more sensitive areas of the LCA. The value of LCA 79 is judged to be medium.

Overall, taking into account the susceptibility and value attached to the LCA 79, the sensitivity of this LCA is judged to be low.

Construction phase operations associated with the Proposed Development and related infrastructure will have a localised, short-term indirect impact on this landscape as it is not located directly within this LCA. Construction traffic may become more apparent on local roads, but construction traffic movements will remain closely associated with traffic movements on the extensive and busy local road network in the surrounding area with little noticeable change, and any additional perceived vehicle movements will be quickly, visually absorbed into existing traffic with little noticeable change.

During the operational phase, the Proposed Development will not be perceived across the majority of this LCA, and it is only immediately next to the Proposed Development site within 1-2 km to the west and south that it will appear as a very small addition locally and will not be apparent or obvious within the wider context of this LCA. The Proposed Development is located away from all the sensitive landscape features identified in this LCA by NIEA.

The predicted magnitude of change in the landscape resource is considered to be indirect localised and small during the construction phase.

The predicted magnitude of change in the landscape resource is considered to be indirect and small during the operational phase.

The predicted significance of landscape effect for LCA 79 during the construction phase is indirect localised, minor, adverse, temporary in duration and assessed as not significant.

The predicted significance of landscape effect for LCA 79 during the operational phase is indirect minor and not significant as predicted effects are limited in extent by the relatively low-lying nature of the proposed site within an extensive valley landscape, the topographical changes to the north, south and east within LCA 79, extensive screening vegetation in the wider landscape, built form to the west of the existing site and will not be perceptible in the wider LCA 79 landscape apart from in close proximity.

Donaghcloney Valley LCA (80)

NIEA has stated that in this LCA 80, the field pattern is generally smaller in scale and the landscape more enclosed towards the outer margins of the valley. The principal settlement of Magheralin has a clustered form. It is surrounded by open arable farmland, although the river corridor has a relatively small-scale landscape pattern, with some prominent lines of mature trees. The roads are generally straight and ribbon development, which is often associated with conifer shelterbelts, is particularly evident along the B9. There are a number of large agri-industrial buildings within the valley, and many are built from prominent, reflective materials.

Susceptibility of this LCA to the type of development proposed is judged to be medium. The landscape within which the Proposed Development is located, is of a relatively open character and flat landform which ensures that it is sensitive to change. It is also overlooked in views from adjacent higher land. The centre of the valley is most prominent and therefore particularly sensitive. The value of LCA 80 is judged to be medium.

Overall, taking into account the susceptibility and value attached to the LCA 80, the sensitivity of this LCA is judged to be medium.

The southern part of Parcel 2 and all of Parcel 3 and 4 is located directly within LCA 80.

Construction phase operations associated with the Proposed Development and related infrastructure will have a localised, short-term impact on the landscape as roadside verges and portions of fields associated with the Proposed Development site are disturbed during the construction phase. Construction traffic may become more apparent on local roads, but construction traffic movements will remain closely associated with traffic movements on the extensive and busy local road network in the surrounding area with little noticeable change, and any additional perceived vehicle movements will be quickly, visually absorbed into existing traffic with little noticeable change.

During the operational phase, the Proposed Development will not be perceived across the majority of this LCA, and it is only immediately next to the Proposed Development site within approximately 1-2 km distance to the west and south that it will appear as a small addition locally and will not be apparent or obvious at all within the wider context of this extensive LCA. The Proposed Development is located away from all the sensitive landscape features identified in this LCA by NIEA.

The predicted magnitude of change in the landscape resource is considered to be localised and small during the construction phase.

The predicted magnitude of change in the landscape resource is considered to be small during the operational phase.

The predicted significance of landscape effect for LCA 80 during the construction phase is localised, minor, adverse, temporary in duration and assessed as not significant.

The predicted significance of landscape effect for LCA 80 during the operational phase is minor and not significant as predicted effects are limited in extent by the generally low-lying nature of the proposed site within an extensive, well vegetated landscape, the topographical changes to the north, south and east within LCA 80, extensive screening vegetation in the wider landscape, built form to the west of the existing site and will not be perceptible in the wider LCA 80 landscape apart from in close proximity.

Upper Ballinderry Plateau LCA (109)

NIEA has stated that in this LCA 109, the field pattern is quite small scale over much of the area but opens out towards the urban edge of Lurgan, where several factories have been built. There are numerous hedgerow trees and a consistent patchwork of fields and hedgerows. The field pattern varies; fields are always geometric in shape and are generally medium to large in size but there are also pockets of small-scale farmland and paddocks, particularly on the fringes of settlements. Avenues and stands of beech trees, church spires and the glimpsed views of large farmsteads and country houses are important local landmarks.

Susceptibility of this LCA to the type of development proposed is judged to be low. There are patches of degradation, particularly on the northern fringes of Maghaberry, where the massive prison and poultry farm developments have destroyed the farmed pattern of the landscape. The fields on the fringes of these developments are mostly derelict, with discontinuous hedgerows and derelict farm buildings. The slightly undulating nature of the land allows single buildings to have relatively little visual impact.

The areas which are most sensitive to change are on the southern margins of the plateau, particularly on the steep slopes of Friar's Glen and on the slopes to the south of Maghaberry, which overlook the Lagan Valley. However, the Proposed Development site is approximately 7.7km southwest of Maghaberry, meaning that the development will not have a negative impact on the more sensitive areas of the LCA. The value of LCA 109 is judged to be medium.

Overall, taking into account the susceptibility and value attached to the LCA 109, the sensitivity of this LCA is judged to be medium.

Parcel 1 and the northern most portion of Parcel 2 is located directly within LCA 109.

Construction phase operations associated with the Proposed Development and related infrastructure will have a localised, short-term impact on the landscape as roadside verges and portions of existing fields are disturbed during the construction phase. Construction traffic may become more apparent on local roads, but construction traffic movements will remain closely associated with traffic movements on the extensive and busy local road network in the surrounding area with little noticeable change, and any additional perceived vehicle movements will be quickly, visually absorbed into existing traffic with little noticeable change.

During the operational phase, the Proposed Development will not be perceived across the majority of this LCA, and it is only immediately next to the Proposed Development site at distances of approximately 1-2 km from the west and south that it will appear as a small addition locally and will not be apparent or obvious within the wider context of this extensive LCA being located away from all the sensitive landscape features identified in this LCA by NIEA.

The predicted magnitude of change in the landscape resource is considered to be localised and small during the construction phase.

The predicted magnitude of change in the landscape resource is considered to be small during the operational phase.

The predicted significance of landscape effect for LCA 109 during the construction phase is localised, minor, adverse, temporary in duration and assessed as not significant.

The predicted significance of landscape effect for LCA 109 during the operational phase is minor and not significant as predicted effects are limited in extent by the generally low-lying nature of the proposed site within an extensive valley landscape, the topographical changes to the north, south and east within LCA 109, extensive screening vegetation in the wider landscape, built form to the west of the existing site and will not be perceptible in the wider LCA 109 landscape apart from in close proximity.

1.6.3 Landscape Designation Impacts

As described in section 1.4 above when AONB, Historic Parks and Gardens and Walking Trails, were assessed it has been found that due to separation distance and intervening topography and trees no significant effects are predicted for any of these landscape designations and it is not necessary to consider these in any more detail.

There will not be significant landscape or visual effects on any AONB and Historic Parks and Garden landscape designations or Walking Trails (Ulster Way).

Table 7: Summary of Predicted Landscape Character and Designation Effects

Landscape Character / Designation	Predicted Construction Phase Landscape Effects	Predicted Operational Phase Landscape Effects
Lough Neagh Basin – RLCA 14	Minor, localised temporary adverse and not significant	Minor and not significant
Down Drumlins and Holywood Hills – RLCA 22	Minor, localised temporary adverse and not significant	Minor and not significant
Craigavon Plateau LCA (79)	Minor, indirect localised temporary adverse and not significant	Minor, indirect localised temporary adverse and not significant
Donaghcloney Valley LCA (80)	Minor, localised temporary adverse and not significant	Minor, localised temporary adverse and not significant
Upper Ballinderry Plateau LCA (109)	Minor, localised temporary adverse and not significant	Minor, localised temporary adverse and not significant
AONB	None	None
Historic Parks & Gardens	None	None
The Ulster Way	None	None
Way Marked Trails	None	None

1.7 Visual Effects

A series of 11 representative viewpoints have been selected to illustrate the existing visual context of the Proposed Development and as an aid to the visual impact assessment. All of the viewpoints have been located on publicly accessible roads, footways and verges within the study area (refer Appendix A: Figure 1.2 Viewpoints Map) associated with the Proposed Development. Visual effects from the representative viewpoints considered in the LVIA are described in Table 8 to 18 below.

The assessment of the existing environment and the impact of the Proposed Development on visual receptors has established that there will be no protected views or scenic views significantly affected by the Proposed Development.

Further, there will be no important views from visitor amenity areas or tourist sites significantly affected by the Proposed Development due to intervening topography, vegetation, and distance of potential views.

In order to avoid repetition, an assessment of construction phase impacts and predicted operational phase impacts are included within each of the following viewpoint assessments.

Table 8: Viewpoint 1: Dromore Road

Viewpoint 1 – Dromore Road			
Grid Ref	311672; 356449	Existing Viewpoint Location	Appendix B: VP01 – Dromore Road (1)
Direction of View	North-east	Approx Distance to Proposed Development	180m from south-western boundary of Parcel 3
Description of existing view and potential receptors	<p>This viewpoint is located on the roadside on the Dromore Road, which is approx. 180m from the south-west boundary of the middle portion of land of the Proposed Development. The view is considered to be representative of direct views experienced by road users traveling north and south on the Dromore Road from the scattered residential properties along the road.</p> <p>The existing view available from this location is slightly elevated within existing farmland that is generally level in character with strong hedgerows and trees at the boundaries that screen lower level views. Large farm buildings are visible to the left of the view with several residential properties visible to the right of the view in the middle ground and distant view. Overhead lines on tall, wooded pole sets also cross the view.</p> <p>This viewpoint is representative of local users in this area. Overall, this view is open in nature.</p>		
Sensitivity	<p>Receptors at this location are judged to be of a medium susceptibility as they are predominantly transient receptors on the local roads.</p> <p>The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route; therefore, the value of the view is judged to be low.</p> <p>Overall the sensitivity of the view is judged to be medium.</p>		
Magnitude of Change – Construction Phase	<p>During the construction phase, operations and machinery movements associated with the Proposed Development will be visible at mid distance across the central portion of the view, though perceived below and against existing field boundary hedgerows when visible. Construction phase activities and vehicular movements will be viewed as a medium change to the overall view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and medium.</p>		
Magnitude of Change – Operational Phase	<p>Proposed solar arrays, substation and site boundary fencing associated with the Proposed Development will be visible, prior to the successful establishment of mitigation planting, within the middle ground of the available view, though seen below the perceived horizon line formed by existing field boundary hedgerows on more elevated land to the rear of the panels in this field. The Proposed Development is read in context with the large existing farm buildings in this view. Longer distance views remain unaffected. Overall, the magnitude of visual impact during the operational phase is judged to be high.</p>		
Significance of Visual Effect during Construction Phase	<p>Localised Moderate, temporary, assessed as significant, effects predicted to be experienced during the construction phase of the Proposed Development.</p>		
Significance of Visual Effect during Operational Phase	<p>Localised Moderate to major, long term, reversible effects assessed as significant, predicted to be experienced during the operational phase of the Proposed Development prior to successful establishment of proposed boundary planting.</p> <p>Following the successful establishment of planting the significance of visual effect is considered to reduce to Moderate, long term, reversible, assessed as not significant.</p>		

Table 9: Viewpoint 2; Planters Park

Viewpoint 2 – Planters Park			
Grid Ref	311478; 356703	Existing Viewpoint Location	Appendix B: VP02 – Dromore Road at Planters Park
Direction of View	North-east	Approx Distance to Proposed Development	320m from south-western boundary of Parcel 3
Description of existing view and potential receptors	<p>This viewpoint is located on the Dromore Road at Planters Park, the entrance to Dollingstown F.C, which is approx. 320m from the south-west boundary of the Proposed Development. The view is considered to be representative of direct views experienced by road users traveling north and south on the Dromore Road from the scattered residential properties along the road and those entering Planters Park.</p> <p>The existing view available from this location is slightly elevated within existing farmland that is flat in character with strong hedgerows and trees at the boundaries that screen low level views. The main feature of the view is the entrance to Planters Park in the foreground. Electricity poles are visible in the distance from this viewpoint.</p> <p>This viewpoint is representative of local users in this area. Overall, this view is open in nature.</p>		
Sensitivity	<p>Receptors at this location are judged to be of a medium susceptibility as they are predominantly transient receptors on the local roads.</p> <p>The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route; therefore, the value of the view is judged to be low.</p> <p>Overall the sensitivity of the view is judged to be medium.</p>		
Magnitude of Change – Construction Phase	<p>During the construction phase, operations and machinery movements associated with the Proposed Development will be visible at mid distance across the central portion of the view, though perceived below and against existing field boundary hedgerows on more elevated land. Construction phase activities and vehicular movements will be viewed as a moderate change to the overall view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and medium.</p>		
Magnitude of Change – Operational Phase	<p>Proposed solar arrays, substation and site boundary fencing associated with the Proposed Development will be visible, prior to the successful establishment of mitigation planting, within the middle ground of the available view, though seen below the perceived horizon line formed by existing field boundary hedgerows on more elevated land to the rear of the panels in this field. Longer distance views to the horizon remain unaffected. Overall, the magnitude of visual impact during the operational phase is judged to be medium.</p>		
Significance of Visual Effect during Construction Phase	<p>Localised Moderate, temporary, assessed as not significant, effects predicted to be experienced during the construction phase of the Proposed Development.</p>		
Significance of Visual Effect during Operational Phase	<p>Localised Moderate, long term, reversible effects assessed as not significant, predicted to be experienced during the operational phase of the Proposed Development prior to successful establishment of proposed boundary planting.</p> <p>Following the successful establishment of planting the significance of visual effect is considered to reduce to Minor to moderate, long term, reversible, assessed as not significant.</p>		

Table 100: Viewpoint 3; Springhill Road

Viewpoint 3 – Springhill Road			
Grid Ref	311490; 357765	Existing Viewpoint Location	Appendix B: VP03 – Springhill Road
Direction of View	North-west	Approx Distance to Proposed Development	On southeast boundary of Parcel 1

Viewpoint 3 – Springhill Road

Description of existing view and potential receptors	<p>This viewpoint is located on the southern verge of Springhill Road, approx. 50m south-west of the proposed new access point for Parcel 1, of the Proposed Development. The view is considered to be representative of views experienced by road users travelling north-east on the Springhill Road and from scattered residential receptors in close proximity.</p> <p>The existing view available from this location is enclosed with dense, mature vegetation associated with the northern and southern boundaries of the Springhill Road, which provide screening from the horizon and any middle-distance views. The trees along the road and the electricity pole visible in the central portion of the view provide verticality to the location. An entrance to a driveway is visible to the right of the viewpoint, at mid-distance, while long-distance views north-east, along Springhill Road are also visible.</p> <p>This viewpoint is representative of local users in this area. Overall, this view is enclosed in nature.</p>
Sensitivity	<p>Receptors at this location are judged to be of a medium susceptibility as they are local community and transient receptors on the local roads.</p> <p>The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route; therefore, the value of the view is judged to be medium.</p> <p>Overall the sensitivity of the view is judged to be medium.</p>
Magnitude of Change – Construction Phase	<p>During the construction phase, operations and machinery movements associated with the Proposed Development will be visible at varying distances to the left of the view, though perceived above and beyond the existing, relocated field boundary hedgerows, east and west of the proposed access. Construction phase activities and vehicular movements will be viewed as a medium change to the overall available view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and medium.</p>
Magnitude of Change – Operational Phase	<p>Upper portions of the proposed solar arrays, security cameras and site boundary fencing associated with the Proposed Development will be visible, prior to the successful establishment of mitigation planting, across the left hand portion of the available view at varying distances beyond the relocated hedgerow. Visible elements of the Proposed Development will be seen below and against existing horizons formed by more elevated disant lands and mature vegetation. Overall, the magnitude of visual impact during the operational phase is judged to be medium, prior to the successful establishment of mitigation planting.</p>
Significance of Visual Effect during Construction Phase	<p>Localised Moderate, temporary, short duration assessed as significant; effects predicted to be experienced during the construction phase of the Proposed Development.</p>
Significance of Visual Effect during Operational Phase	<p>Localised Moderate, temporary, reversible effects assessed as not significant, predicted to be experienced during the operational phase of the Proposed Development prior to successful establishment of proposed boundary planting.</p> <p>Following the successful establishment of planting the significance of visual effect is considered to reduce to Negligible to minor, long term, reversible, assessed as not significant.</p>

Table 111: Viewpoint 4; Acres Road

Viewpoint 4 – Acres

Grid Ref	311809; 357832	Existing Viewpoint Location	Appendix B: VP04 – Acres Road
Direction of View	South-east	Approx Distance to Proposed Development	345m from northern boundary of Parcel 2

Viewpoint 4 – Acres	
Description of existing view and potential receptors	<p>This viewpoint is located on the roadside on the Acres Road, which is approx. 345m from northern boundary of Parcel 2 of the Proposed Development. The view is considered to be representative of direct views experienced by road users travelling east and west on the Acres Road from the scattered residential properties, farm buildings and industrial businesses along the road.</p> <p>The existing view available from this location is low-lying within existing farmland that is flat in character with some hedgerows and trees at the boundaries that partially screen low level views. While not shown in the montage there are farm buildings are visible to the right of the view while trees and electricity poles along Acres Road add verticality to the view.</p> <p>This viewpoint is representative of local users in this area. Overall, this view is open in nature.</p>
Sensitivity	<p>Receptors at this location are judged to be of a medium susceptibility as they are predominantly local transient receptors on the local roads.</p> <p>The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route; therefore, the value of the view is judged to be medium.</p> <p>Overall the sensitivity of the view is judged to be medium.</p>
Magnitude of Change – Construction Phase	<p>During the construction phase, operations and machinery movements associated with the Proposed Development will be partially visible at long distance across the Parcel 2 of the view, though perceived below and against existing field boundary hedgerows on more elevated land. Construction phase activities and vehicular movements will be viewed as a medium change to the overall view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and medium.</p>
Magnitude of Change – Operational Phase	<p>Proposed solar arrays and site boundary fencing associated with the Proposed Development will be partially visible, prior to the successful establishment of mitigation planting, within the medium distance of the available view, though seen below the perceived horizon line formed by existing field boundary hedgerows on more elevated land to the rear of the panels in these fields. Overall, the magnitude of visual impact during the operational phase is judged to be medium.</p>
Significance of Visual Effect during Construction Phase	<p>Localised Moderate, temporary, short duration assessed as not significant; effects predicted to be experienced during the construction phase of the Proposed Development.</p>
Significance of Visual Effect during Operational Phase	<p>Localised Moderate, long term, reversible effects assessed as not significant, predicted to be experienced during the operational phase of the Proposed Development prior to successful establishment of proposed boundary planting.</p> <p>Following the successful establishment of planting the significance of visual effect is considered to reduce to Minor, long term, reversible, assessed as not significant.</p>

Table 122: Viewpoint 5; Acres Road

Viewpoint 5 – Acres Road			
Grid Ref	312214; 357782	Existing Viewpoint Location	Appendix B: VP05 – Acres Road
Direction of View	South-west	Approx Distance to Proposed Development	183m from north-eastern boundary of Parcel 2
Description of existing view and potential receptors	<p>This viewpoint is located on the roadside on the Dromore Road, which is approx. 183m from north-eastern boundary of Parcel 2. The view is considered to be representative of direct views experienced by road users travelling east to west on the Acres Road with road users views directed along the road by roadside vegetation. Views will also be available from the scattered residential properties along the road.</p> <p>The existing view available from this location is low-lying within existing farmland that is flat in character with strong hedgerows and trees at the boundaries that screen low level</p>		

Viewpoint 5 – Acres Road

	<p>views. While not shown in the montage there are farm buildings visible to the left of the view while electricity poles along Acres Road provide verticality to the view also to the left. The main visual draw of the viewpoint is the gated entrance to a field in the foreground.</p> <p>This viewpoint is representative of local users in this area. Overall, this view is open in nature.</p>
Sensitivity	<p>Receptors at this location are judged to be of a medium susceptibility as they are predominantly local transient receptors on the local roads.</p> <p>The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route; therefore, the value of the view is judged to be medium.</p> <p>Overall the sensitivity of the view is judged to be medium.</p>
Magnitude of Change – Construction Phase	<p>During the construction phase, operations and machinery movements associated with the Proposed Development will be visible at mid distance across the central portion and to the right of the view, though perceived below and against existing field boundary hedgerows on more elevated land. Construction phase activities and vehicular movements will be viewed as a small change to the overall view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and small.</p>
Magnitude of Change – Operational Phase	<p>Proposed solar arrays and site boundary fencing associated with the Proposed Development will be visible, prior to the successful establishment of mitigation planting, within the middle ground of the available view, though seen below the perceived horizon line formed by existing field boundary hedgerows on more elevated land to the rear of the panels in this field. Overall, the magnitude of visual impact during the operational phase is judged to be medium.</p>
Significance of Visual Effect during Construction Phase	<p>Localised Minor, temporary, assessed as not significant, effects predicted to be experienced during the construction phase of the Proposed Development.</p>
Significance of Visual Effect during Operational Phase	<p>Localised Moderate, long term, reversible effects assessed as not significant, predicted to be experienced during the operational phase of the Proposed Development prior to successful establishment of proposed boundary planting.</p> <p>Following the successful establishment of planting the significance of visual effect is considered to reduce to Minor, long term, reversible, assessed as not significant.</p>

Table 133: Viewpoint 6; New Forge Road

Viewpoint 6 – New Forge Road

Grid Ref	312888; 357496	Existing Viewpoint Location	Appendix B: VP06–New Forge Road
Direction of View	West	Approx Distance to Proposed Development	377m from eastern boundary of Parcel 2
Description of existing view and potential receptors	<p>This viewpoint is located on the roadside on the New Forge Road, which is approx. 377m from eastern boundary of Parcel 2. The view is considered to be representative of direct views experienced by road users travelling north and south on the New Forge Road from the scattered residential properties along the road.</p> <p>The main visual draw from this location is the New Forge Road itself and the stone wall running along the roadside. To the west of the roadside a large, flat agricultural field is a prominent feature which is bound by trees and hedgerow. A residential property is visible to the left of the view and electricity poles with cables are visible across the entire viewpoint. The horizon is defined by mature vegetation and hedgerows.</p> <p>This viewpoint is representative of local users in this area. Overall, this view is open in nature.</p>		
Sensitivity	<p>Receptors at this location are judged to be of a medium susceptibility as they are local transient receptors on the local roads.</p>		

Viewpoint 6 – New Forge Road	
	The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route; therefore, the value of the view is judged to be medium. Overall the sensitivity of the view is judged to be medium.
Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the Proposed Development will be on very partially visible at middle and long distance across the central portion and to the right of the view, though perceived below and against existing field boundary hedgerows on more elevated land. Construction phase activities and vehicular movements will be viewed as a negligible change to the overall view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and negligible.
Magnitude of Change – Operational Phase	Proposed solar arrays and site boundary fencing associated with the Proposed Development will be only partially visible, prior to the successful establishment of mitigation planting, within the middle ground and long distance of the available view, though seen below the perceived horizon line formed by existing field boundary hedgerows on more elevated land to the rear of the panels in this field. Overall, the magnitude of visual impact during the operational phase is judged to be negligible.
Significance of Visual Effect during Construction Phase	Localised Negligible to minor, temporary, short duration assessed as not significant; effects predicted to be experienced during the construction phase of the Proposed Development.
Significance of Visual Effect during Operational Phase	Localised Negligible to minor, long term, reversible effects assessed as not significant.

Table 144: Viewpoint 7; New Forge Road

Viewpoint 7 – New Forge Road			
Grid Ref	312594; 356922	Existing Viewpoint Location	Appendix B: VP07–New Forge Road
Direction of View	North-west	Approx Distance to Proposed Development	290m from eastern boundary of Parcel 2
Description of existing view and potential receptors	<p>This viewpoint is located from a field gate access gap in the roadside hedgerow along the New Forge Road, which is approx. 285m from eastern boundary of Parcel 2. The view is considered to be representative of direct views experienced by road users travelling north and south on the New Forge Road with views for road travellers directed along road in the direction of travel by strong hedgerows. View will also be available from adjacent scattered residential properties along the road.</p> <p>Views north-west from this location, are open and panoramic in nature. The immediate foreground is comprised of existing roadside hedgerow, with mid-distance lands characterised by flat, agricultural land. Distant horizons are formed by existing tree canopies which are visible across the entire viewpoint.</p> <p>Timber poles carrying overhead lines are visible throughout the view at various distances, adding verticality to the view.</p> <p>The view is considered to be representative of views experienced primarily by road users travelling along New Forge Road, though is also experienced by residential receptors in the immediate vicinity and recreational receptors on the New Forge Road.</p>		
Sensitivity	<p>Residential and recreational receptors are judged to be of high susceptibility to change in their views, whilst transient receptors on the New Forge Road are judged to be of a low susceptibility to change as their main focus is on the direction of travel and roadside vegetation focuses the view along the direction of travel.</p> <p>The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route. However, the views experienced are available to residential receptors in the vicinity, and the overall value of the view available is judged to be medium. Overall, considering the receptor susceptibility and the value of the view, the sensitivity is judged to be medium.</p>		

Viewpoint 7 – New Forge Road

Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the Proposed Development will be visible at middle distance across the central portion of the view, though perceived below and against existing field boundary hedgerows. Construction phase activities and vehicular movements will be viewed as a small change to the overall view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and small.
Magnitude of Change – Operational Phase	Proposed solar arrays and site boundary fencing associated with the Proposed Development will be partially visible to the centre of this viewpoint, prior to the successful establishment of mitigation planting, within the middle distance of the available view. However, existing hedgerow along the field boundary will provide adequate screening to other parts of the Proposed Development. Overall, the magnitude of visual impact during the operational phase is judged to be medium.
Significance of Visual Effect during Construction Phase	Localised Minor, temporary, short duration assessed as not significant; effects predicted to be experienced during the construction phase of the Proposed Development.
Significance of Visual Effect during Operational Phase	Localised Moderate, long term, reversible effects assessed as not significant, predicted to be experienced during the operational phase of the Proposed Development prior to successful establishment of proposed boundary planting. Following the successful establishment of planting the significance of visual effect is considered to reduce to Minor, long term, reversible, assessed as not significant.

Table 155: Viewpoint 8; New Forge Road

Viewpoint 8 – New Forge Road

Grid Ref	312461; 356563	Existing Viewpoint Location	Appendix B: VP08–New Forge Road
Direction of View	West	Approx Distance to Proposed Development	420m from south-eastern boundary of Parcel 2
Description of existing view and potential receptors	<p>This viewpoint is located along the New Forge Road, which is approx. 420m from south-eastern boundary of Parcel 2. The view is considered to be representative of direct views experienced by road users travelling north and south on the New Forge Road from the scattered residential properties along the road.</p> <p>The main visual draw from this viewpoint are the residential properties, which are visible to the right, central and distant view. Electricity poles provide verticality to the view. Beyond the residential properties in the foreground, the existing view available from this location is low-lying within existing farmland that is flat in character with strong hedgerows and trees at the boundaries. The horizon mainly consists of mature vegetation and a building from the Polypipe manufacturing site can also be seen.</p> <p>This viewpoint is representative of local users in this area. Overall, this view is open in nature.</p>		
Sensitivity	<p>Residential and recreational receptors are judged to be of high susceptibility to change in their views, whilst transient receptors on the New Forge Road are judged to be of a low susceptibility to change as their main focus is on the direction of travel and roadside vegetation focuses the view along the direction of travel.</p> <p>The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route. However, the views experienced are available to residential receptors in the vicinity, and the overall value of the view available is judged to be medium.</p> <p>Overall, considering the receptor susceptibility and the value of the view, the sensitivity is judged to be medium.</p>		
Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the Proposed Development will be fully screened by existing field boundary hedgerows. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be no change.		

Viewpoint 8 – New Forge Road

Magnitude of Change – Operational Phase	Proposed solar arrays and site boundary fencing associated with the Proposed Development will be fully screened by hedgerows along field boundaries that will provide adequate screening. Overall, the magnitude of visual impact during the operational phase is judged to be no change.
Significance of Visual Effect during Construction Phase	The effects predicted to be experienced during the construction phase of the Proposed Development are No change.
Significance of Visual Effect during Operational Phase	The effects predicted to be experienced during the operation phase of the Proposed Development are No change.

Table 166: Viewpoint 9; Dromore Road

Viewpoint 9 – Dromore Road

Grid Ref	312753; 356142	Existing Viewpoint Location	Appendix B: VP09 – Dromore Road
Direction of View	North-west	Approx Distance to Proposed Development	60m from eastern boundary of Parcel 4

Description of existing view and potential receptors	<p>This viewpoint is located on the roadside on the Dromore Road, which is approx. 60m from the eastern boundary of Parcel 4. The view is considered to be representative of direct views experienced by road users travelling north west to south east on the Dromore Road with views directed along the direction of travel by the strong roadside hedgerows. Views will also be available from the scattered residential properties along the road.</p> <p>The existing view available from this location is low-lying within existing farmland that is flat in character with strong hedgerows and trees at the boundaries that screen low level views. Electricity poles and trees along the Dromore Road provide verticality to the view and views of the Dromore Road extend into the distant view. A residential property to the right of the view is a prominent feature of this location as well as the mature, dense vegetation along the roadside.</p> <p>This viewpoint is representative of local users in this area. Overall, this view is open in nature.</p>
Sensitivity	<p>Residential and recreational receptors are judged to be of high susceptibility to change in their views, whilst transient receptors on the Dromore Road are judged to be of a low susceptibility to change as their main focus is on the direction of travel and roadside vegetation focuses the view along the direction of travel.</p> <p>The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route. However, the views experienced are available to residential receptors in the vicinity, and the overall value of the view available is judged to be medium. Overall, considering the receptor susceptibility and the value of the view, the sensitivity is judged to be medium.</p>
Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the Proposed Development will be visible at close range across the central portion of the view, though perceived against beyond and against existing field boundary hedgerows. Ground level views of construction activities are completely screened. Construction phase activities and vehicular movements will be viewed as a small change to the overall view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and small.
Magnitude of Change – Operational Phase	Proposed solar arrays and site boundary fencing associated with the Proposed Development will be visible, prior to the successful establishment of mitigation planting, within the middle ground, to the left side of the available view, though existing road side hedgerow provides strong screening. Overall, the magnitude of visual impact during the operational phase is judged to be medium.
Significance of Visual Effect during Construction Phase	Localised Minor, temporary, short duration assessed as not significant; effects predicted to be experienced during the construction phase of the Proposed Development.

Viewpoint 9 – Dromore Road

Significance of Visual Effect during Operational Phase	Localised Moderate, long term, reversible effects assessed as not significant, predicted to be experienced during the operational phase of the Proposed Development prior to successful establishment of proposed boundary planting. Following the successful establishment of planting the significance of visual effect is considered to reduce to Minor, long term, reversible, assessed as not significant.
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Table 177: Viewpoint 10; Drumlin Road

Viewpoint 10 – Drumlin Road

Grid Ref	312425; 355843	Existing Viewpoint Location	Appendix B: VP010 – Drumlin Road
Direction of View	North	Approx Distance to Proposed Development	Adjacent to western boundary of Parcel 4

Description of existing view and potential receptors	This viewpoint is located along the Drumlin Road, which is adjacent to western boundary of Parcel 4. The view is considered to be representative of direct views experienced by road users traveling north and south on the Drumlin Road from the scattered residential properties along the road. The existing view available from this location is low-lying within existing farmland that is flat in character with strong hedgerows and trees to the right and left of the view that screen low level views. Hedgerows and vegetation are visible in the distance with several residential properties visible to the right and left of the view in the distant view. This viewpoint is representative of local users in this area. Overall, this view is open in nature.
Sensitivity	Receptors at this location are judged to be of a medium susceptibility as they are local community and transient receptors on the local roads. The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route; therefore, the value of the view is judged to be low. Overall the sensitivity of the view is judged to be medium.
Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the Proposed Development will be directly visible in the foreground and at mid distance across the central portion of the view, though perceived below and against existing field boundary hedgerows on more elevated land. Construction phase activities and vehicular movements will be viewed as a large change to the overall view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and large.
Magnitude of Change – Operational Phase	Proposed solar arrays and site boundary fencing associated with the Proposed Development will be directly visible, prior to the successful establishment of mitigation planting, across the entire width of the available view with a glimpse of the existing horizon line formed by existing field boundary hedgerows on more elevated land to the rear of the panels in this field. Overall, the magnitude of visual impact during the operational phase is judged to be large.
Significance of Visual Effect during Construction Phase	Localised Moderate to major, temporary, short duration assessed as significant; effects predicted to be experienced during the construction phase of the Proposed Development.
Significance of Visual Effect during Operational Phase	Localised Moderate to major, long term, reversible effects assessed as significant, predicted to be experienced during the operational phase of the Proposed Development prior to successful establishment of proposed boundary planting. Following the successful establishment of planting the significance of visual effect is considered to reduce to Moderate, long term, reversible, assessed as not significant.

Table 188: Viewpoint 11; Dromore Road at Lagan Bridge

Viewpoint 11 – Dromore Road at Lagan Bridge			
Grid Ref	312089; 356505	Existing Viewpoint Location	Appendix B: VP011 – Dromore Road at Lagan Bridge
Direction of View	West	Approx Distance to Proposed Development	Adjacent to southern boundary of Parcel 3
Description of existing view and potential receptors	<p>This viewpoint is located on the roadside on the Dromore Road at the Lagan Bridge, which is adjacent to the southern boundary of Parcel 3. The view is considered to be representative of direct views experienced by road users travelling east and west on the Dromore Road from the scattered residential properties along the road.</p> <p>The main visual draw from this viewpoint are the two large, mature trees in the central portion of the view. The distant horizon is visible and is defined by vegetation and hedgerows. In addition, the existing view available from this location is low-lying within existing farmland that is flat in character with strong hedgerows and trees at the boundaries that screen low level views.</p> <p>This viewpoint is representative of local users in this area. Overall, this view is open in nature.</p>		
Sensitivity	<p>Receptors at this location are judged to be of a medium susceptibility as they are local community and transient receptors on the local roads.</p> <p>The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route; therefore, the value of the view is judged to be medium.</p> <p>Overall the sensitivity of the view is judged to be medium.</p>		
Magnitude of Change – Construction Phase	<p>During the construction phase, operations and machinery movements associated with the Proposed Development will be visible at mid distance across the central portion of the view, though perceived below and against existing field boundary hedgerows on more elevated land. The hedgerow to the roadside immediately to the left will be removed to provide visibility splays. Construction phase activities and vehicular movements will be viewed as a medium change to the overall view. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be localised and medium.</p>		
Magnitude of Change – Operational Phase	<p>Proposed solar arrays and site boundary fencing associated with the Proposed Development will be visible, prior to the successful establishment of mitigation planting, within the middle ground of the available view, though seen below the perceived horizon line formed by existing field boundary hedgerows on more elevated land to the rear of the panels in this field. The hedgerow to the roadside immediately to the left will be removed to provide visibility splays but won't increase the visibility of the Proposed Development. Overall, the magnitude of visual impact during the operational phase is judged to be medium.</p>		
Significance of Visual Effect during Construction Phase	<p>Localised Moderate, temporary, short duration assessed as not significant; effects predicted to be experienced during the construction phase of the Proposed Development.</p>		
Significance of Visual Effect during Operational Phase	<p>Localised Moderate, long term, reversible effects assessed as not significant, predicted to be experienced during the operational phase of the Proposed Development prior to successful establishment of proposed boundary planting.</p> <p>Following the successful establishment of planting the significance of visual effect is considered to reduce to Minor, long term, reversible, assessed as not significant.</p>		

Table 19 below summarises the predicted significance of visual effect for each of the previously assessed viewpoints.

Table 199: Summary of Predicted Visual Effects for Viewpoints

Viewpoint		Predicted Construction Phase Visual Impacts	Predicted Operational Phase Visual Impacts
1	Dromore Road	Moderate and significant effects	Moderate to major and significant effects prior to proposed mitigation, then reducing to Moderate and not significant
2	Planters Park	Moderate and significant effects	Moderate and not significant effects prior to proposed mitigation, then reducing to Minor to moderate and not significant
3	Springhill Road	Moderate and significant effects	Moderate and not significant effects prior to proposed mitigation, then reducing to Negligible to Minor and not significant
4	Acres Road West	Moderate and significant effects	Moderate and not significant effects prior to proposed mitigation, then reducing to Minor and not significant
5	Acres Road East	Moderate and significant effects	Moderate and not significant effects prior to proposed mitigation, then reducing to Minor and not significant
6	New Forge Road North	Negligible to minor and significant effects	Negligible to minor and not significant effects
7	New Forge Road Mid	Minor and significant effects	Moderate and not significant effects prior to proposed mitigation, then reducing to Minor and not significant
8	New Forge Road South	No change	No change
9	Dromore Road	Minor and significant effects	Moderate and not significant effects prior to proposed mitigation, then reducing to minor and not significant
10	Drumlin Road	Moderate to major and significant effects	Moderate to major and significant effects prior to proposed mitigation, then reducing to Moderate and not significant
11	Dromore Road at Lagan Bridge	Moderate and significant effects	Moderate and not significant effects prior to proposed mitigation, then reducing to Minor and not significant

Residential Properties

As part of the of visual effects assessment associated with the Proposed Development, an assessment of the predicted visual impacts on residential properties that occur within 500 m of the Proposed Development has also been undertaken. At distances beyond 500m, where properties have potential views towards the

Proposed Development, there are intervening hedgerows, trees and topography that decrease the visibility of the Proposed Development and it is absorbed into the landscape and no significant visual effects are predicted for properties beyond 500m.

There are a number of residential properties across the four parcels of land that make up the Proposed Development site. At Parcel 1, there are linear residential properties along the eastern side of Inn Road which have potential rear views of the Proposed Development. The properties do in the majority of cases have tall hedgerows and trees at the rear boundaries that screen views towards the Proposed Development, however, there are some gaps at the rear of some of the properties which will need to be filled by landscaping as part of mitigation for the proposal and will effectively screen views from these properties from year 1. The predicted visual effect will be Minor and not significant.

On the southern side of Parcel 1 on Springhill Road there is a single two storey farmhouse that is a listed building. This property is set well back from Springhill Road and the Proposed Development but has potential front views partly broken by roadside hedgerows and scattered tall trees. There are also two further properties on Springhill Road, near its junction with Acres Road, that although single storey have potential rear views in the direction of the Proposed Development but have strong evergreen vegetation at their boundaries. There will be new tree planting along the proposed site boundary with Springhill Road that will reduce visibility and the predicted visual effect will for these properties will be Minor and not significant.

There are properties on both sides of New Forge Road between Orange Lane and Dromore Road that have a mixture of potential rear and front views in the direction of the Proposed Development (Parcel 2). As shown by Viewpoints 6, 7 and 8 the Proposed Development is well screened in views from New Forge Road by existing vegetation and the predicted visual effect will be Minor and not significant.

There is a single dwelling on Dromore Road (nr 102) near its junction with Milltown Road that has potential rear and side views towards Parcel 3. It is proposed to implement new tree planting along the western boundary of Parcel 3 that will effectively screen visibility. The predicted visual effect will be Minor to moderate and not significant.

There is a further single dwelling on Dromore Road (nr 108) adjacent to the River Lagan that has potential rear and side views towards Parcel 3. It is proposed to implement new tree planting along the eastern corner of Parcel 3 that will effectively screen visibility. The predicted visual effect will be Minor to moderate and not significant.

There are three dwellings on Dromore Road between Planters Park and Mill Hill that will have a mixture of front and rear views in the direction of the Proposed Development at elevated locations. The Proposed Development is distant in views and at a lower level and therefore any views are drawn to the horizon. It is proposed to implement new tree planting along the western boundary of Parcel 3 that will add to the screening effect of existing hedges and reduce potential visibility. The predicted visual effect will be Minor to moderate and not significant.

East of Drumlin Road there are several scattered residential properties along the eastern edge of Dromore Road that have potential direct visibility of Parcel 4 of the Proposed Development. There is an existing, well established hedgerow along this section of Dromore Road that it is proposed to be retained and managed to 3 / 4m height to aid mitigation of potential visibility from those properties along the eastern side of Dromore Road. Mitigation planting in the form of new hedgerow with scattered tree planting is proposed along the eastern boundary of the Proposed Development to further aid integration and reduce potential visibility of the Proposed Development from the identified properties. The predicted visual effect will be Minor to moderate and not significant.

There is linear residential development on Drumlin Road to the immediate southwest of Parcel 4 that have potential side and rear views in the direction of the Proposed Development. There are mature trees and hedgerows between these houses and Parcel 4 that will provide, an effective screen and Minor and not significant effects are predicted for the properties with limited visibility.

1.8 Mitigation

1.8.1 Landscaping Aims and Objectives

Whilst no significant landscape or visual effects are predicted to be experienced as a consequence of the Proposed Development, the following soft landscape interventions have been included within the overall proposals to aid the integration of the development into the surrounding landscape context. The below text sets out the aims of proposed landscape interventions but the role of the landscape architect in design evolution must also be noted. Please refer to Landscape Planting Plan that accompanies the planning application – Drawing nr 2702.5.01.

Landscaping Aims

- To protect the existing landscape features to integrate the Proposed Development and associated infrastructure physically and visually into the surrounding landscape; and
- Provide suitable screening to minimise visual intrusion, particularly in views from close residential receptors to reduce significant effects regarding the visual impact of the proposal and associated structures on sensitive receptors.

General Objectives

- Retention of existing hedgerows, trees, shelterbelt planting and roadside vegetation on peripheral and internal boundaries in accordance with BS5837:2012 Trees in relation to design, demolition, and construction - Recommendations.
- Mitigation should be in keeping with the existing landscape.
- Selection of locally appropriate deciduous trees and hedge species will be made to ensure successful plant establishment and to maintain and increase biodiversity whilst providing visual screening of the proposed development year-round.

1.8.2 Monitoring and Maintenance

Maintenance of the landscape works will be an integral part of the on-going site management. This will include a defects liability period during which any defective plant material (as stated above) is to be replaced. Litter picking and weed control shall be carefully monitored during the early growing seasons of the landscape maintenance contract. Contractors will comply with all health and safety standards, in particular regard to maintenance works during the operational phase of the Proposed Development.

1.9 Conclusion

The Proposed Development is located directly within two landscape character areas identified as Donaghcloney Valley LCA 80 and Upper Ballinderry Plateau LCA 109 and immediately adjacent to Craigavon Plateau LCA 79. The predicted significance of landscape effect for LCA 79, 80 and 109 during the operational phase is Minor and not significant as predicted effects are limited in extent by the generally flat low-lying nature of the proposed site within an extensive landscape, the topographical changes across each of the LCAs, extensive screening vegetation in the wider landscape, built form to the west and north of the existing site and will not be perceptible in the wider landscape of the LCAs apart from in close proximity. The Proposed

Development is also not located in proximity to any of the sensitive key landscape features identified by NIEA within LCA 79, 80 or 109.

The Proposed Development is located at the boundary of Lough Neagh Basin RLCA 14 and Down Drumlins and Holywood Hills RLCA 22. The predicted significance of landscape effect for RLCA 14 and 22 during the operational phase is Minor and not significant as predicted effects are limited in extent by the low-lying flat nature of the proposed site and surrounding topography, surrounding trees, built form in the surrounding landscape and will be barely perceptible in the wider landscape and will be locally perceived with existing large, shed type developments that are common across this RLCA locally. The Proposed Development is also not located in proximity to any of the sensitive key landscape features identified by NIEA within RLCA 14 and 22.

The Proposed Development has been established to not have any significant effect on any landscape designations including; AONB's; Historic Parks & Gardens; Ulster Way; or Way Marked Trails; due to distance from these features and/or intervening topography and vegetation.

A total of 11 viewpoints have been assessed, for both construction and operational phases of the Proposed Development. Two viewpoints that are in close proximity to the Proposed Development (VP1 and VP10) have been assessment as having significant effects during the operational phase before the proposed mitigation measures have been implemented. Once the mitigation measures have been implemented the predicted effects reduce to Moderate and no significant effects. A combination of distance of view and the screening effects of vegetation and topography reduce the significant effects for the majority of views.

Assessment of effects on residential properties has taken place for properties on Inn Road Dromore Road, New Forge Road and Drumlin Road at locations where properties may have potential filtered views in relatively close proximity. Where properties are in proximity to the Proposed Development landscape mitigation has been proposed to strengthen and reinforce existing hedgerows and trees and overall, no significant visual effects are predicted. At distances greater than 500m the Proposed Development is well screened in views and at such longer distances no significant effects are predicted for views from residential properties.

Overall, the surrounding landscape and its visual resources has the ability to accommodate the changes associated with this type of development.



APPENDICES

Appendix A

**LVIA Figures - (Fig 1.2
Viewpoints; Fig 1.3
LCA Map)**



Legend

- Project boundary
- ◆ Viewpoint

VIEWPOINT DATA

ID	Title	East	North
VP01	B2 Dromore Rd	311672	356449
VP02	B2 Planters Park	311487	356703
VP03	Springhill Rd	311465	357750
VP04	Acres Rd west	311809	357832
VP05	Acres Rd east	312214	357782
VP06	New Forge Rd nth	312888	357496
VP07	New Forge Rd mid	312594	356922
VP08	New Forge Rd sth	312461	356563
VP09	Dromore Rd	312753	356142
VP10	Drumlin Rd	312425	355843
VP11	B2 Bridge	312089	356505



Elmwood House, 74 Boucher Road,
BELFAST, BT12 6RZ
T: 028 9066 7914

Client:



Project: Magheralin Solar Farm

Title: Viewpoints Map

Fig No: 1.2

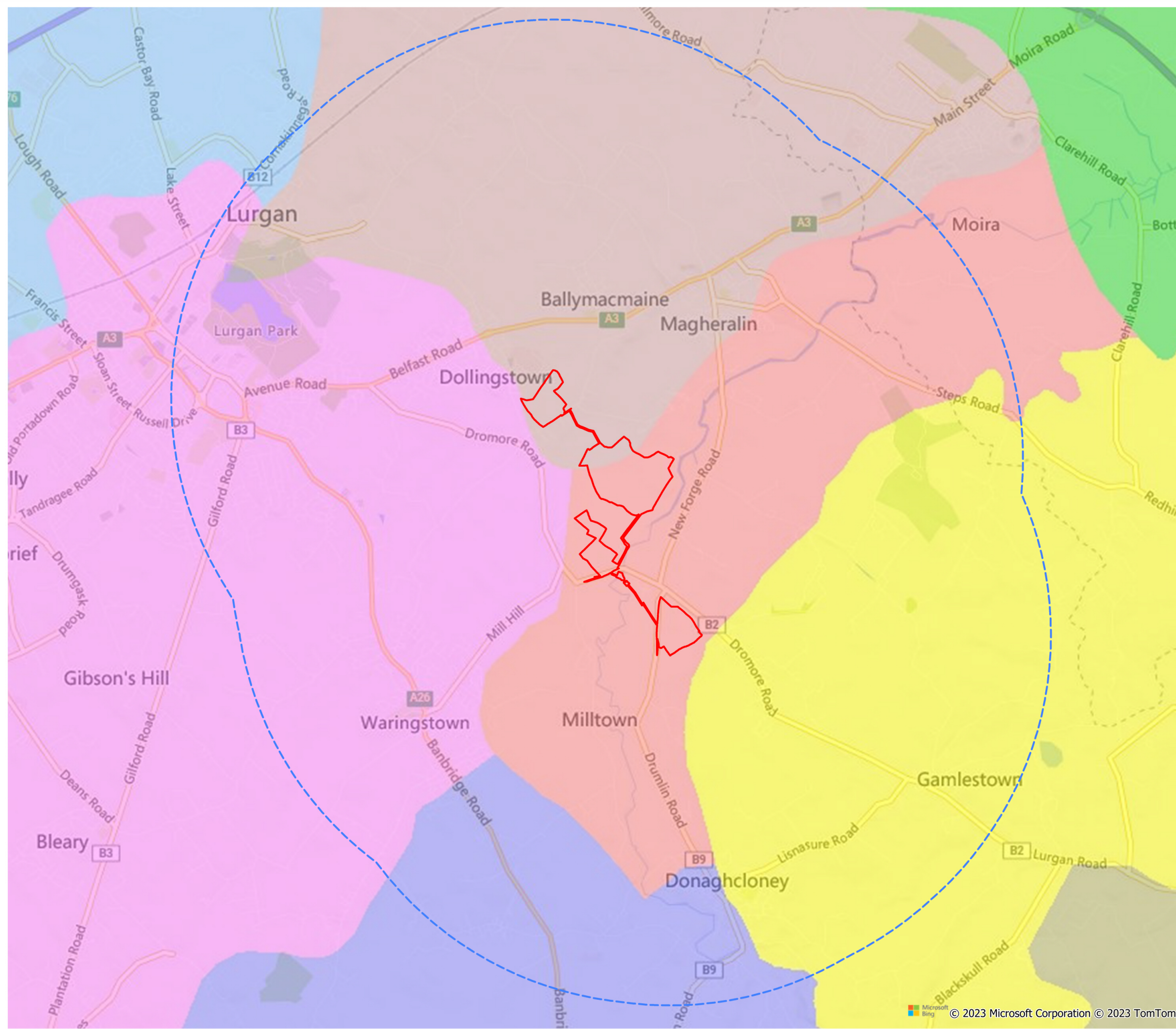
Status: Draft
Drawn: PM

Date: Dec 2023
Ckd: SA



Projection Irish Grid
Scale 1: 10,000 @ A3

RPS Project Number: NI 2702



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Legend

- Project boundary
- 3 km buffer

LCA Areas

- Lough Neagh Peatlands
- Craigavon Plateau
- Upper Ballindery Plateau
- Donaghcloney Valley
- North Banbridge Hills
- Kilwarlin Plateau



A TETRA TECH COMPANY
 Elmwood House, 74 Boucher Road,
 BELFAST, BT12 6RZ
 T: 028 9066 7914

Client:

Project: Magheralin Solar Farm

Title: Landscape Character Area Map
 (areas within 3 km)

Fig No: 1.3

Status: Draft Date: Dec 2023
 Drawn: PM Ckd: SA



Projection Irish Grid
 Scale 1: 50,000 @ A3

RPS Project Number: NI 2702

Appendix B

Photomontages