Derrygrogan Little Solar Farm

Landscape and Visual Impact Assessment

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Stuart Anderson	04/12/25

Prepared by:

RPS

Angela Assorto-McIlwaine

Senior Associate - Landscape

Elmwood House
74 Boucher Road
Belfast
BT12 6RZ

T +44 28 9066 7914

E a.assortomcilwaine@rps.tetratech.com

Prepared for:

RES

Rachel Buchanan

Development Project Manager

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1 LANDSCAPE AND VISUAL

1.1 Introduction

Tetra Tech RPS was commissioned by RES on behalf of Ballyteige Solar Limited ('the Applicant') to undertake a Landscape and Visual Impact Assessment (LVIA) to support a planning application for which seeks permission for the construction and operation of a solar PV facility with associated infrastructure (hereafter referred to as "The Proposed Development").

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

This assessment has been prepared and reviewed by chartered landscape architects at Tetra Tech 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;

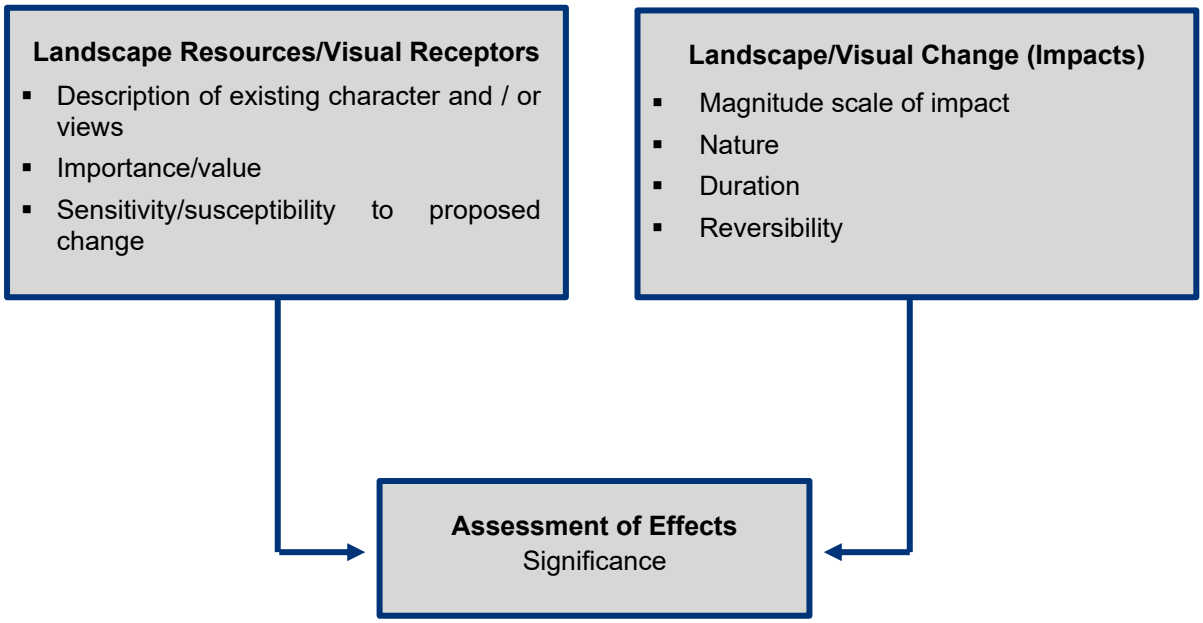
- Guidelines for Landscape and Visual Impact Assessment, Third Edition (The Landscape Institute and Institute of Environmental Management & Assessment, 2013) (GLVIA3);
- Technical Guidance Note 06/19 Visual Representation of Development Proposals (The Landscape Institute, 2019).

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 OSI maps;
- Aerial photography;
- Offaly County Development Plan 2021 - 2027;
- Offaly Landscape Character Assessment; and,
- Drawings of the Project.

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 because 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 judgment 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 judgments in this LVIA are impartial and based on professional experience and opinion informed by best practice guidance.

The effects of a proposed development are of variable duration and have been assessed as being of either short term, medium term or long term duration, and permanent or reversible. Effects have been considered as

being 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 reversible.

Where effects arise during the construction period, these are most likely to be because of movement of construction machinery within the landscape; construction of new structures and construction activities within the site boundary all of which are 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 details of the Proposed Development a map was created which identified areas from which the Proposed Development may theoretically be visible (refer Appendix A; Figure 1.1). This Zone of Theoretical Visibility (ZTV) is the area within which views of the Proposed Development are theoretically available, 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, individual buildings or expansive areas of built form. 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 combined with intervening screening effects associated with hedges, trees, woodland and built form 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 extensively perceived within the wider landscape due to intervening topographical changes, extensive built form 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 project. 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 Project.

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 project 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 project 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 Project, 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/ landscape character is affected by the removal or alteration of existing features and the introduction of new features. This is a direct impact on landscape character.

Secondly, the indirect impacts of a project 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/ 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 Project 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 Project 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 landscape designations, such as Areas of High Amenity (AHA), which are identified from County Development Plans and their level of importance.

For this assessment, landscape value is categorised as:

- Very High: Areas of landscape acknowledged through national or international designation 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 and may include regionally or nationally designated landscape areas;
- 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 several factors including susceptibility to change, value and condition. 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 a 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. Medium tolerance to change.	Locally/ regionally designated/ valued countryside and landscape features. Medium tolerance to change.	Medium
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 the Project and its impact on the key landscape characteristics. Judgements regarding the magnitude of Landscape/ 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 project will affect views within the study area. The assessment of visual effects therefore needs to consider:

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

1.2.10 Photomontages/Visualisations

Images representing existing available views, from each of the publicly accessible locations at selected viewpoints have been captured using a digital SLR camera with a full frame sensor in combination with a 50mm fixed focal length lens, mounted on a tripod for horizontal alignment.

Generally, the horizontal angle of view represented within photomontages accompanying this LVIA is 56.5 degrees and has been taken with a 50mm fixed focus lens. For each of the viewpoints represented a record is taken of the light, visibility conditions, camera height above ground, time of day, viewpoint coordinates and the bearing of each view towards the Proposed Development Site.

A highly accurate 3D computer model of the Proposed Development is created directly from drawings. All materials and finishes are modelled as realistically as possible. Rendering is the process by which the computer generates realistic images from the 3D model. All the information recorded at the time the site photos were taken, that is, camera co-ordinates, angle of view, and direction of view, is used to generate matching renders for each view. Careful consideration is given to the direction of sunlight, time of day, weather conditions and distance of viewer, so that photomontages will match reality in terms of lighting, sharpness, density of colour etc.

At this stage the rendered image of the Proposed Development is superimposed onto its matching photograph. The mathematical accuracy is then double checked and verified by ensuring that existing prominent features which are also modelled line up exactly in the photo. Next, the photomontage specialist establishes, which existing features, such as buildings and trees are in the foreground of the Proposed Development and those that are in the background, i.e. which features will mask the development, and which ones will appear behind

the development. When it is found that the development is not visible due to foreground features, its outline is indicated with a red line.

The resulting imagery, having gone through this extensive procedure, is an accurate and verifiable representation of the Proposed Development as viewed from the viewpoint positions (refer Appendix B).

1.2.11 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/ landscape features with public access. Low tolerance to change.	Observers enjoying the countryside from their homes or pursuing quiet outdoor recreation are more sensitive to visual change. Little tolerance to change	High
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

Definition		Sensitivity
Visual resource Susceptibility	**Visual resource value**	
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

1.2.12 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 the 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
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

1.2.13 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 LVIAs 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 Proposed Development 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.
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 Effect 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.

1.2.14 Cumulative Effects

The methodology for assessment of cumulative impacts has been derived from Guidelines for Landscape and Visual Impact Assessment, Third Edition (The Landscape Institute and Institute of Environmental Management & Assessment, 2013) (GLVIA3).

The purpose of the Cumulative Landscape and Visual Impact Assessment (CLVIA) is to consider the landscape and visual impacts of the Proposed Development when viewed in context with other similar development.

Cumulative effects consist of direct effects on the physical character of the site containing the development, and indirect, perceived effects on the character of areas from which the developments would be visible. GLVIA3 identifies effects as follows:

- Cumulative effects as "*the additional changes caused by a project in conjunction with other similar developments or as the combined effect of a set of developments, taken together (SNH, 2012:4)*";
- Cumulative landscape effects as effects that "*can impact on either the physical fabric or character of the landscape, or any special value attached to it (SNH, 2012:10)*";
- Cumulative visual effects as effects that can be caused by combined visibility, which "*occurs when the observer is able to see two or more developments from one viewpoint*" and/or sequential effects which "*occur when the observer has to move to another viewpoint to see different developments (SNH, 2012:11)*".

The significance of any identified cumulative landscape and visual effect has been assessed as per the main LVIA methodology. These categories have been based on the same combination of receptor sensitivity and predicted magnitude of impact in order to identify the residual significance of effects.

1.2.15 Cumulative Baseline

The Cumulative Landscape and Visual Impact Assessment (CLVIA), in line with GLVIA 3, considers the additional landscape and visual effects arising from the Proposed Development in combination with other consented developments and proposed developments that are the subject of a valid planning application but have yet to be determined (GLVIA 3, Paragraph 7.13), which may give rise to cumulative landscape and visual effects.

To assess for cumulative impacts, a review of Offaly County Council's online planning portal, the EIA Portal and An Coimisiún Pleanála's ('the Commission') website has been completed to determine the likelihood for potential significant cumulative landscape and visual effects, taking consideration of the following criteria:

- Type and extent of identified proposal;
- The distance between the identified proposal and the Proposed Development;
- Likely visual influence of the identified proposal;
- Potential inter-visibility between the identified proposal and the Proposed Development;
- Potential for cumulative landscape effects on the physical fabric of the landscape or its scenic qualities and
- The potential for combined successive and sequential visual effects in the context of the Proposed Development.

The review of current planning applications has identified a several applications which lie in proximity to the Proposed Development are listed in **Table 7** below together with clarification on whether the identified scheme has been carried forward for assessment.

Table 7: Cumulative Developments Considered

Development	Reference No.	Development	Approx. Distance from Proposed Development	Potential for cumulative landscape and / or visual effects
Colehill substation	N/A	SID application submitted for 110kV substation	Approx. 1.4 km south-west of the Proposed Development site	Potential for cumulative landscape and visual impacts – **carried forward for assessment.**
Derrygrogan Big Solar Farm	22/378 (ACP Reference 318041-23)	Conditional Approval for 73.9ha solar farm development.	Immediately south-west of the Proposed Development site	Potential for cumulative landscape and visual impacts – **carried forward for assessment.**
Ballyteige Solar Farm	21/98	Conditional Approval for 60.53ha solar farm development.	Approx. 1.7 km south-west of the Proposed Development site	Potential for cumulative landscape and visual impacts – **carried forward for assessment.**
Ballyteige Solar Farm	N/A	Amendment to consented Ballyteige Solar Farm (PL Ref: 2198) – 50.53-hectare solar development	Approx. 1.7 km south-west of the Proposed Development site	Potential for cumulative landscape and visual impacts – **carried forward for assessment.**
Derries Solar Farm	21/8	Conditional Approval for 53.7ha solar farm development.	Approx. 900 m north of the Proposed Development site	Potential for cumulative landscape and visual impacts – **carried forward for assessment**

Development	Reference No.	Development	Approx. Distance from Proposed Development	Potential for cumulative landscape and / or visual effects
Ballyduff Solar Farm	17/11,	Conditional Approval for 17.7ha solar farm development.	Approx. 8.2 km west of the Proposed Development site.	No potential for cumulative visual impacts due to screening provided by intervening topographical changes and vegetation cover. Not carried forward for assessment.
Gormagh Solar Farm	22/387 (ACP Reference PL19.318001)	Conditional Approval for 83.55ha solar farm development.	Approx. 6.7 km west of the Proposed Development site	No potential for cumulative visual impacts due to screening provided by intervening topographical changes and vegetation cover. Not carried forward for assessment.
Clonminch Tullamore	20579	Conditional approval for 2 no. energy storage containers with a capacity of up to 10mw and associated transformers, inverters, a switchroom building of approximately 88m2 (containing switch and control rooms), internal cabling, electrical and communications.	Approx. 8.5 km southwest of the Proposed Development site	No potential for cumulative visual impacts due to screening provided by intervening topographical changes and vegetation cover. Not carried forward for assessment.
Derrynagall/ Ballydaly Tullamore	18167	Conditional approval for a grid system services facility within a total site area of 0.84 hectares, to include 1 no. single storey electrical substation building, 1 no. customer switchgear container, 17 no. 2mw electrical inverter/transformer station modules (skids), 10 no. cont	Approx. 5.2 km west of the Proposed Development site	No potential for cumulative visual impacts due to screening provided by intervening topographical changes and vegetation cover. Not carried forward for assessment.
Ballyduff Townland Tullamore	23315	Conditional approval for replacement of a permitted single storey terminal electrical station and separate permitted	Approx. 8.9 km southwest of the Proposed Development site	No potential for cumulative visual impacts due to screening provided by intervening

Development	Reference No.	Development	Approx. Distance from Proposed Development	Potential for cumulative landscape and / or visual effects
		switchgear enclosure (both previously permitted as part of a solar farm permission by Offaly County Council under planning ref. 17/11)		topographical changes and vegetation cover. Not carried forward for assessment.
Tullamore Distillery Campus, Ballard & Clonminch, Tullamore	2460250	Conditional approval for construction of a solar PV development with an installed capacity of up to 2.6 MWdc (MEC=0) to provide electrical power to the existing distillery comprising approximately 4,100 no. photovoltaic panels on ground mounted frames etc.	Approx. 9 km southwest of the Proposed Development site	No potential for cumulative visual impacts due to screening provided by intervening topographical changes and vegetation cover. Not carried forward for assessment.
Tullamore Retail Park, Cloncollog, Tullamore	2460514	Conditional approval for a new prefabricated substation building within the existing car park to cater for 5no. electric car charging points for 10no. electric car parking spaces, along with all associated ancillary site works	Approx. 6.8 km southwest of the Proposed Development site	No potential for cumulative visual impacts due to screening provided by intervening topographical changes, built form and vegetation cover. Not carried forward for assessment.

1.3 Receiving Environment

1.3.1 General Overview

The Proposed Development site is wholly located within County Offaly and is therefore subject to the Policies and Designations listed in the current Offaly County Development Plan 2021 – 2027 (OCDP).

The site for the Proposed Development is in a generally rural agricultural setting, approximately 7.2km northeast of Tullamore and c. 23 km to the south of Mullingar. The Grand Canal runs in a general east to west direction, approximately 1.3 km to the south of the Proposed Development (at its closest point).

The land use across the study area is predominately agriculture in nature, punctuated by a mix of individual residential properties, farmsteads and ribbon residential development associated with the strong, but well assimilated minor and local road networks. Field pattern surrounding the Proposed Development site is typically small to medium in scale and of a similar in character to the Proposed Development site. Field pattern is well defined by a combination of established field boundary hedgerows, woodland copses and hedgerows with mature trees, which creates a strong sense of enclosure. To the northeast of the Proposed Development site lies a large peatland area, some of which has been worked for peat extraction or has been turned over to coniferous forestry. Overhead lines and wooden poles are visible throughout the area and are often located adjacent to the local road networks and near to residential dwellings. The internal and external hedgerow

boundaries of the Proposed Development site comprise a mix of tall mature hedgerow species and mature trees.

In relation to trails and walking routes in proximity to the Proposed Development site it is noted that the Kilmurry Bog Walk & Nature Trail is located adjacent to a small portion of the northern boundary associated with the Proposed Development site, whilst the Ballycommon Greenway, forming part of the wider Grand Canal Greenway walking route is located approximately 1.6km south of the site at its closest point. The Grand Canal not only provides a navigational route, but its northern towpath forms the Grand Canal Greenway walking trial with a cycle route on the southern towpath. An offset of the trial known as the Kilbeggan Spur Walk runs along the towpath of the feeder canal by Campbell's Bridge, approximately 1 km to the southwest of Proposed Development site.

There are residential dwellings scattered along the local road networks south, west and north of the Proposed Development site. The L1025, north of the site has residential properties with amenity space well defined by hedgerows formed from a variety of species. Hedgerow and vegetation along the northern edge of the Kilmurry Bog Walk & Nature Trail screen views of the site from these properties. Residential properties to the south and west of the Proposed Development site are partially screened by existing vegetation of various forms, with visibility of the Proposed Development from such properties either fully or partially screened by intervening field boundary vegetation.

The wider study area contrasts with the immediate site and surrounds as it contains Ballycommon GAA Club, Offaly rowing club (c.3.5km southwest), recreational sports grounds, areas of commercial forestry, bogland and ribbon development along the main connecting routes between settlements, in particular the L1025 extending from Tullamore. There are several bogland areas contrasted with the settlement of Tullamore, with Kilmurry Bog lying immediately north-east of the site.

There are various small streams and rivers found through the surroundings, the Tullamore River is approximately c.4.7km to the south.

1.4 Legislation and Guidance

National and local planning authority policies of relevance to landscape and visual impact matters in relation to the Proposed Development and the surrounding area are outlined in the following sections.

1.4.1 European landscape convention

The European Landscape Convention 2000 (ELC) considers all landscapes as being inclusive and important to everyone not just designated landscapes.

The ELC's definition of landscape which has been consigned within the Planning and Development Act 2000 by the Planning and Development (Amendment) Act 2010 (No. 30 of 2010) is as follows:

"*Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*". (Article 1.a. of the European Landscape Convention)

1.4.2 Planning and Development Act 2000 (as Amended)

The Planning and Development Act 2000 (as Amended), Part XIII (Amenities), Sections 202 to 204 provides provision for local authorities to designate areas of the landscape as either Areas of Special Amenity (Section 202) or Landscape Conservation Areas (Section 204).

1.4.3 National Landscape Strategy for Ireland 2015 – 2025

The National Landscape Strategy for Ireland 2015-2025 (NLS) seeks to "*ensure compliance with the European Landscape Convention and to establish principles for protecting and enhancing the landscape while positively*

managing its change. It will provide a high level policy framework to achieve balance between the protection, management and planning of the landscape by way of supporting actions".

Objectives of the NLS are to

- *implement the European Landscape Convention by integrating landscape into our approach to sustainable development;*
- *establish and embed a public process of gathering, sharing and interpreting scientific, technical and cultural information in order to carry out evidence-based identification and description of the character, resources and processes of the landscape;*
- *provide a policy framework, which will put in place measures at national, sectoral - including agriculture, tourism, energy, transport and marine - and local level, together with civil society, to protect, manage and properly plan through high quality design for the sustainable stewardship of our landscape;*

ensure that we take advantage of opportunities to implement policies relating to landscape use that are complementary and mutually reinforcing and that conflicting policy objectives are avoided in as far as possible.

1.4.4 Offaly County Development Plan

The Offaly County Development Plan 2021-2027 (OCDP) recognises the importance of the aims of the National Landscape Strategy and principles of the European Landscape Convention, through facilitating development, while protecting the County's Landscape. Policies relevant to the Proposed Development Site can be found in Chapter 4 Biodiversity and Landscape Strategic Aim.

The Strategic Aim of the OCDP is to "*Protect and enhance Offaly's natural assets of clean water, biodiversity, landscape, green infrastructure, heritage and agricultural land.*"

Chapter 4 of the OCDP includes the following information of relevance to this LVIA;

1.4.4.1 Trees, Forestry and Hedgerows

The OCDP at Section 4.9 of Chapter 4 states that "*the Council aims to protect individual trees, groups of trees or woodland, which are of environmental and/or amenity value. This can be done so with a Tree Preservation Order (TPO) …….. Tree Preservation Orders are set out below in Table 4.13*".

A review of Table 4.13, Table 4.14 and Figure 4.11 of the OCDP has identified that there are no individual trees, groups of trees or woodlands that are subject to or protected by a Tree Preservation Order within the 3km LVIA Study area associated with the Proposed Development.

1.4.4.2 Areas of High Amenity

The OCDP identifies Areas of High Amenity (AHA) as being "*areas worthy of special protection / enhancement due to their uniqueness and scenic / amenity value. These designations are additional to statutory national and European designations which may overlap with these AHA. It is a priority of the Council to protect and preserve the AHAs in Table 4.17 and Figure 4.18*"

A review of Table 4.17 and Figure 4.18 of the OCDP has identified the following AHAs located in proximity to the Proposed Development Site;

- Waterways and Wetlands (Nr. 2) – Grand Canal; located approximately 1.3 km to the south of the Application Site;
- Upland Areas (Nr. 6) - Croghan Hill; located approximately 5.9 km to the northeast of the Application Site; and
- Peatlands (Nr. 8) – Raheenmore Bog; located approximately 2.8km northeast of the Application Site.

1.4.4.3 Landscape

Chapter 4, Section 4.14 of the OCDP states that "*The National Landscape Strategy for Ireland (NLS) 2015-2025 recognises the importance of landscape protection and its interconnectivity with biodiversity and climate change. Both the NLS and the Eastern and Midland Regional Spatial and Economic Strategy (RSES) identify the need for national and regional landscape character assessments to provide a framework for comprehensive and consistent local (county) landscape character assessments advising on the proper collection, monitoring and review of the landscapes' physical, scientific, ecological, biodiversity and cultural assets. Once the necessary national and regional landscape character assessments and maps are in place, in addition to guidance on local landscape character assessments, the Council will carry out a comprehensive county landscape character assessment to ensure a consistent approach*".

It is noted that the OCDP does not yet contain a Landscape Character Assessment of the landscapes within Offaly County, however the OCDP at Section 4.14.1 has classified the landscape in terms of sensitivity, classifying the counties landscapes as being of either "*Low, Moderate and High Sensitivity."*

Table 4.18 of the OCDP identifies Low Sensitivity Areas as being "*robust landscapes which are tolerant to change, such as the county's main urban and farming areas, which have the ability to accommodate development"*.

Table 4.19 of the OCDP identifies Moderate Sensitivity Areas as being areas which "*can accommodate development pressure but with limitations in the scale and magnitude. In this category of sensitivity, elements of the landscape can accept some changes while others are more vulnerable to change*."

Table 4.20 of the OCDP identifies High Sensitivity Areas as being areas which "*are vulnerable landscapes with the ability to accommodate limited development pressure. In this category of landscape, landscape elements are highly sensitive to certain types of change. If pressure for development exceeds the landscapes limitations the character of the landscape may change"*.

1.4.4.4 Protected Views, Prospects and Key Amenity Routes

Chapter 4, Section 4.12.2 states that "*The Council recognises the need to protect the character of the county by protecting Key Scenic Views, Prospects and Key Amenity Routes within the county*". Table 4.21 lists the Key Scenic Views and Prospect and a review of the available information has identified that there are no Protected Views or Prospects within the focused 3km LVIA Study Area for the Proposed Development site (refer Appendix A; Figure 1.3).

1.5 Proposed Development

The Proposed Development comprises the construction and operation of a solar farm comprising:

- Solar arrays and string inverters on metal support structures or on concrete foundations if archaeological mitigation measures are required;
- 7 no. Low Voltage/Medium Voltage (LV/MV) Transformer Stations with associated hardstanding areas;
- Internal access track with two perimeter gates;
- CCTV camera units mounted on poles and located on the boundary of the development;
- Site access via Derrygrogan Little Road with associated visibility splay;
- Security fencing incorporating timber posts and deer fencing;
- Cable trenching and backfilling;
- Temporary construction compound; and

- Structural landscape planting and ecological enhancement measures.

It is also noted that an underground cable connection is required to connect the Proposed Development to the approved Derrygrogan Big Solar Farm. The cable will be installed within the carriageway or roadside verge of the Derrygrogan Little Road (L1023 local road). It is important to note the grid connection does not form part of this planning application.

When operational, the site will support a dual renewable/farming use, and the land area will remain agricultural. Sheep grazing can 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.

To avoid repetition, an assessment of the construction phase impacts and predicted operational phase impacts is included within the landscape assessments contained in Error! Reference source not found..

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, 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.

The Proposed Development will be decommissioned once the period of consent has been reached. At that time all elements of the development will be carefully removed from the site in line with best practise, to ensure that no negative landscape or environmental effects arise from the decommissioning phase.

Consequently potential impacts arising from the decommissioning of the Proposed Development are similar in nature to the impacts arsing because of the construction phase, but in reverse with elements of the Proposed Development being removed and lands being reinstated for agricultural use. Planting included as part of the Proposed Development, woodland planting, hedgerow planting and infill planting will all be retained, increasing the vegetation coverage within the Proposed Development site.

To avoid repetition, only an assessment of construction phase impacts and predicted operational phase impacts are included within the following assessment table.

An assessment of the predicted landscape impacts during both construction and operation is provided in **Error! R eference source not found.** below.

Table 8: Landscape Effects

Sensitivity	The Proposed Development site is wholly located within the Offaly County Council area, upon lands which are predominantly used for arable pastoral practises. A review of the OCDP has identified that the majority of the site is located within an area classified as Low Landscape Sensitivity. The northeastern portion of the Proposed Development site is located within an area identified in the OCDP as a landscape of Medium Sensitivity, though it is considered that the area of land upon which the development is located shares similar characteristics as the main portion of the development site, with medium scale fields well defined by hedgerows with mature trees. Enclosure is provided by existing linear vegetation belts to the immediate north and east of the proposed development site, which together with the strong field pattern aid in limiting visibility of individual fields within the wider landscape. In summation it is considered that the landscape within which the Proposed Development is located is of a Low Landscape Sensitivity and as such; ▪ Is a robust landscapes which is tolerant to change; ▪ is comprised of lands which are predominantly flat in nature with localised areas of gently undulating agricultural land; ▪ has fields that are well defined by mature hedgerow often with mature trees, with particular enclosure apparent from the local road networks; and ▪ has the ability to accommodate development. The pasture grassland cover within the Site has been farmed, continuously for an extended period of time and grazing fields are a common feature in the wider landscape and are considered to be easily replaced and therefore of a low value. The hedgerows and treelined boundaries have a higher landscape value. The lands associated with the Proposed Development site are not located within any national or local landscape designations. The low-lying lands within the site have fields bordered with mature hedgerows many with a dense mature treeline that creates a strong sense of enclosure and reduces susceptibility to the type of development proposed as these features will contribute to the absorption of the Proposed Development within the existing field pattern. Overall, the value of the landscape within the Proposed Development site is judged to be Medium. The characteristics of the Proposed Development site are judged to combine to a low susceptibility to the type of development proposed. Overall, given the size and scale of the Proposed Development, along with the review of the local landscape, the overall sensitivity is judged to be **Medium**.
Magnitude of Change – Construction Phase	Direct impacts on the landscape will arise from the physical construction of the Proposed Development, resulting in the introduction of new man-made elements into the existing landscape. The main area of activity during the construction phase will be around the temporary construction compound which is located in Field 6 and Field 7. The existing vegetation within the Proposed Development site boundary will be largely retained, which aids in integrating construction phase activities within the surrounding landscape context. Small sections of hedgerow, proposed to be removed to facilitate the main site access as well as internal access between fields (associated with the access track formation) will, were visible, be perceived as a localised minor alteration to the vegetation cover within the development site. A single tree is proposed to be removed as part of the development work, though this will be difficult to perceive both at a local level and at a wider landscape level due to intervening vegetation cover. The construction of new built form and associated ancillary features, with the presence of construction materials, heavy plant, compounds, and lighting, will be locally noticeable during the construction phase of the Proposed Development. It is considered that construction activities will have a localised, temporary, short-term effect on the surrounding landscape. Localised portions of the LCA adjacent to, but beyond, the site boundary of the Proposed Development are predicted to experience indirect effects, linked to the perception of additional vehicle movements along the local road networks, associated with deliveries of materials to the site. Whilst such movements will increase traffic on the local road network, these construction activities are considered temporary in nature. The predicted magnitude of change associated with the construction stage of the Proposed Development, including construction of ancillary infrastructure, fencing and vehicle movements associated with deliveries to the site is localised with some alteration to the baseline and considered **medium** during the construction phase, restricted to land contained within the site boundary.

Magnitude of Change – Operational Phase	During the operational phase, the Proposed Development will result in solar arrays and associated infrastructure being placed across the extent of the development site for the duration of the permitted operational period. Existing retained field boundary hedgerows with trees and new woodland planting, hedgerow planting and infill planting to strengthen existing boundary hedgerows will be maintained throughout the operational period, maintaining and increasing enclosure. New hedgerow and woodland planting associated with the new site access and re-enforcement of existing boundaries will be perceived as a minor alteration locally, as these are not uncommon features within the surrounding landscape. New built form, where visible beyond existing screening / retained vegetation will be viewed as a minor addition, though not generally obvious within the wider context. The predicted magnitude of change in the landscape resource is considered to be localised and medium during the initial operational phase, reducing to negligible as mitigation planting matures and strengthens boundaries.
Significance of Landscape Effect during Construction Phase	**Moderate**, localised, temporary, assessed as not significant effects are predicted to be experienced during the construction phase of the Proposed Development. Remaining portions of the LCA are predicted to experience **no significant effects**.
Significance of Landscape Effect during Operational Phase.	**Moderate** localised, long-term effects assessed as not significant are predicted to be experienced during the initial operational phase. Effects are limited in extent by screening effects produced by existing vegetation cover. Additional elements, where visible, will be perceived as a minor addition to the overall LCA. The predicted effects are considered to reduce to negligible to minor and not significant as mitigation planting matures. Remaining portions of the LCA are predicted to experience **no significant effects** during the operational phase.

1.7 Visual Effects

A series of six 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 the viewpoints have been located on publicly accessible roads, footways and verges within the study area associated with the Proposed Development.

Visual effects from the representative viewpoints considered in the LVIA are described in Table 9 to Table 14 below.

As part of the works undertaken to establish the visual envelope of the Proposed Development, northern portions of the Kilbeggan Spur Walk, approximately 1km west of the Proposed Development site were analysed to assess whether the Proposed Development would be visible in eastern views. It has been established that for northern sections of this walk, predicted to experience visibility of the Proposed Development, actual visibility is negated by either existing vegetation cover directly adjacent to the walkway or by a combination of intervening topographical changes and vegetation associated with field boundaries that lie between the route of the walk and the Proposed Development site boundary.

Therefore it is considered that, following the assessment of the existing environment and the impact of the Proposed Development on visual receptors, there will be no protected views or views from scenic routes affected by the Proposed Development.

To avoid repetition, an assessment of construction phase impacts and predicted operational phase impacts are included within each of the following viewpoint assessment tables.

Table 9: Viewpoint 1: View Derrygrogan Little Road (Site Entrance)

Viewpoint 1 – Derrygrogan Little Road (Site Entrance)			
Grid Ref	640518, 729217	**Existing Viewpoint Location**	Appendix B: VP01 – Derrygrogan Little (site access)

Viewpoint 1 – Derrygrogan Little Road (Site Entrance)			
Direction of View	South-east	**Approx Distance to Proposed Development**	0.2 km

Description of existing view and potential receptors	This viewpoint is located on the southern side of Derrygrogan Little Road approximately 20m from the proposed location forming the site access. The existing view available from this location (refer to Appendix B, VP01 – Derrygrogan Little Road (site access; Existing View) is generally constrained in nature by existing field boundary hedgerow forming the northern boundary of the Derrygrogan Little Road . The immediate foreground of the view is comprised of roadway and existing grassed verge, with field boundary hedgerow screening visibility of agricultural lands beyond. Upper portions of the hedgerow form a perceived horizon, which is elevated and punctuated by existing tree cover beyond. Timber poles carrying overhead lines, whilst not visible in the represented view, are located within the southern verge associated with Derrygrogan Little Road, perceived within the view at varying distances, adding verticality locally. The view is considered to be representative of southern, peripheral views experienced by road users traveling southeast on Derrygrogan Little Road, though the view is also considered to be experienced by recreational receptors using the road network in the immediate vicinity.
Sensitivity	Transient road users are judged to be of a medium susceptibility to change in their views, whilst recreational receptors are judged to be of a high susceptibility to change in their views. The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route. The viewpoint is not located within an area identified from the OCDP as being either an Area of Medium Amenity (AMA) or an Area of High Amenity (AHA). The overall value of the view available is judged to be medium. Overall, taking into account the receptor susceptibility and the value of the view the sensitivity is judged to be **medium.**
Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the formation of the proposed site access will be visible at mid distance and experienced locally as the new access is created. Additional vehicle movements will be experienced locally as they utilise the new access arrangements. Construction phase operations and machinery movements associated with the main area of development will not be visible from this location due to screening provided by retained roadside vegetation. Visible portions of tree canopies, perceived above and beyond the intervening hedgerow will remain unaltered by the proposed construction phase operations. Construction phase activities and vehicular movements will be viewed as a minor, localised 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	During the operational phase, prior to the successful establishment of new hedgerow planting at the site access, elements of the Proposed Development will be partially visible at mid distance within a small portion of the overall view available from this location. Visible elements will be viewed against a strongly vegetated backdrop, aiding integration, and perceived as a minor addition to the view, with the character of the wider view remaining largely unaltered. Existing elements of the view will retain visual prominence, with middle distance and longer distance views remaining unaffected. Overall, the magnitude of visual impact during the operational phase prior to the successful establishment of hedgerows at the site entrance is judged to be **small**, reducing to negligible as new planting establishes.
Significance of Visual Effect during Construction Phase	Localised **Minor**, short-term temporary, assessed as not significant visual effects predicted to be experienced during the construction phase of the Proposed Development.

Viewpoint 1 – Derrygrogan Little Road (Site Entrance)	
Significance of Visual Effect during Operational Phase	Localised **Minor**, medium term, reversible visual effects assessed as not significant, are predicted to be experienced during the initial operational phase of the Proposed Development prior to the successful establishment of planting associated with the site access. Following the successful establishment of planting the significance of visual effect is considered to reduce to **Negligible**, long term, reversible, assessed as not significant.

Table 10: Viewpoint 2: Derrygrogan Little Road

Viewpoint 2 – Derrygrogan Little Road			
Grid Ref	640491, 728872	**Existing Viewpoint Location**	Appendix B: VP02 – Derrygrogan Little
Direction of View	North	**Approx Distance to Proposed Development**	0.55 km

Description of existing view and potential receptors	This viewpoint is located at a field entrance, south of the proposed access location, on the northern side of the Derrygrogan Little Road, approximately 0.55 km south of the Proposed Development. The existing view available from this location (refer to Appendix B, VP02 – Derrygrogan Little Road; Existing View) is generally panoramic in nature, becoming restricted at distance by existing field boundary vegetation which also includes mature trees. The immediate foreground of the view is comprised of arable farmland. Pastoral farmland is visible at mid-distance and further glimpsed to the right of the view at distance. Existing hedge and tree cover associated with residential property to the left of the view partially screens visibility of the property visible at mid-distance. The roofline associated with a further residential property is perceived amongst the vegetation to the left of the view, whilst timber poles carrying overhead lines are visible at a variety of distances, perceived against a strongly vegetated backdrop, where they are perceived as a minor element of the overall view available from this location. The view is considered to be representative of views experienced primarily by road users traveling north on Derrygrogan Little Road , though the view is also considered to be experienced by recreational receptors using the road network.
Sensitivity	Transient road users are judged to be of a medium susceptibility to change in their views, whilst recreational receptors are judged to be of a high susceptibility to change in their views. The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route. The viewpoint is not located within an area identified from the OCDP as being either an AMA or an AHA. The overall value of the view available is judged to be medium. Overall, taking into account the receptor susceptibility and the value of the view the sensitivity is judged to be **Medium.**
Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the Proposed Development will not be visible in the majority of the view due to screening provided by existing boundary vegetation. Machinery and operations associated with the Proposed Development may be perceived beyond intervening vegetation cover where gaps in vegetation allow such views, however visibility will be of a short term duration and difficult to perceive generally in the wider view. Overall, the magnitude of change

Viewpoint 2 – Derrygrogan Little Road	
	during the construction phase of the Proposed Development is judged to be localised and **Negligible.**
Magnitude of Change – Operational Phase	During the operational phase, prior to the successful establishment of new planting on south western boundaries of the site, elements of the Proposed Development may be partially visible at distance where gaps in vegetation cover permit views. Were perceived in the view, visible elements would be seen beyond and well below existing perceived horizons, creating localised points of visual interest. Visible elements will be viewed against a strongly vegetated backdrop, aiding integration, and perceived as a very minor addition to the view, with the character of the wider view remaining largely unaltered. Existing elements of the view will retain visual prominence, with middle distance and longer distance views remaining unaffected. Overall, the magnitude of visual impact during the operational phase prior to the successful establishment of proposed planting is judged to be **Negligible**, reducing to the equivalent of a No Change scenario as new planting establishes.
Significance of Visual Effect during Construction Phase	Localised Negligible to Minor, short-term temporary, assessed as **Negligible** and not significant visual effects predicted to be experienced during the construction phase of the Proposed Development as construction phase operations and machinery movements will be difficult to perceive beyond intervening vegetation cover.
Significance of Visual Effect during Operational Phase	Localised Negligible to Minor, medium term, reversible effects assessed as **Negligible** and not significant visual effects predicted to be experienced during the initial operational phase of the Proposed Development prior to the successful establishment of planting associated with the site access. Following the successful establishment of planting the significance of visual effect is considered to reduce to the equivalent of a **No Change** scenario as established mitigation planting strengthens existing boundary vegetation and obscures the Proposed Development beyond.

Table 11: Viewpoint 3: Kilmurry Bog Walk & Nature Trail

Viewpoint 3 – View from Kilmurry Bog Walk & Nature Trail			
Grid Ref	640710, 729267	**Existing Viewpoint Location**	Appendix B: VP03 – Kilmurry Bog Walk & Nature Trail
Direction of View	South	**Approx Distance to Proposed Development**	0.1 km

Description of existing view and potential receptors	This viewpoint is located on the route / trackway forming the Kilmurry Bog Walk & Nature Trail, approximately 0.1 km north of the northern boundary of the Proposed Development site. The existing view available from this location (refer to Appendix B, VP03 – Kilmurry Bog Walk & Nature Trail; Existing View) is generally open in nature, though partially constrained by localised topographical changes and existing vegetated field boundaries at mid-distance. The immediate foreground of the view is comprised of vegetation cover associated with the former peat / bog land which gives way to pastoral agricultural land on slightly elevated slopes at mid-distance. Pastoral agricultural lands are visible below and in front of the established field boundary vegetation which filters views of agricultural land beyond. Timber poles carrying overhead lines and scattered residential properties are not visible or perceived within the available view at this location.

Viewpoint 3 – View from Kilmurry Bog Walk & Nature Trail	
	The view is representative of southern views experienced by recreational users on the 0.7km long trail.
Sensitivity	Recreational receptors on the trail are judged to be of a high susceptibility to change in their views. The viewpoint does represent views from a recognised trail. The viewpoint is not located within an area identified from the OCDP as being either an Area of Medium Amenity (AMA) or an Area of High Amenity (AHA), however the trail does traverse an area identified as an AMA, and the overall value of the view available is judged to be high. Overall, taking into account the receptor susceptibility and the value of the view the sensitivity is judged to be **high.**
Magnitude of Change – Construction Phase	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 such operations will be viewed below existing perceived horizon lines and against a well vegetated backdrop which will aid integration. 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 **large.**
Magnitude of Change – Operational Phase	During the operational phase, prior to the successful implementation of planting associated with the Proposed Development, proposed solar arrays will be visible to varying degrees at mid-distance across the central portion of the view. Visible elements will be viewed below and against a well vegetated backdrop. Intervening vegetation will locally filter visibility of the Proposed Development. Overall, the magnitude of visual impact during the initial operational phase is judged to be **large**, reducing to small as proposed mitigation planting along the northern boundary establishes.
Significance of Visual Effect during Construction Phase	Localised Major to Substantial, short-term temporary, assessed as **Major** significant visual effects predicted to be experienced during the construction phase of the Proposed Development.
Significance of Visual Effect during Operational Phase	Localised Major to Substantial, assessed as **Major,** medium term, reversible effects assessed as significant, predicted to be experienced during the initial operational phase of the Proposed Development prior to the successful establishment of planting proposed along the northern boundary of the Proposed Development site. Following the successful establishment of planting the significance of visual effect is considered to reduce to Minor to Moderate, assessed as **Minor**, long term, reversible, assessed as not significant visual effects.

Table 12: Viewpoint 4: L1025 road to Tullamore

Viewpoint 4 – L1025 road to Tullamore			
Grid Ref	639800, 728677	**Existing Viewpoint Location**	Appendix B: VP04 – L1025 road to Tullamore
Direction of View	South-west	**Approx Distance to Proposed Development**	0.19 km

Viewpoint 4 – L1025 road to Tullamore	
Description of existing view and potential receptors	This viewpoint is located on the grassed verge forming the northern edge of the L1025, in proximity to residential development located approximately 0.2km from the northern boundary of the Proposed Development Site. The existing view available from this location (refer to Appendix B, VP04 – L1025 road to Tullamore; Existing View) is partially constrained at close distance by existing roadside vegetation forming field boundary opposite residential dwellings adjacent to the L1025 to the rear of the viewpoint location. The immediate foreground of the view is comprised of roadway, existing grassed verge and field boundary hedgerow with agricultural lands visible at mid-distance bounded by mature trees and hedgerow which form the southern edge of the Kilmurry Bog Walk & Nature Trail. Timber poles carrying overhead lines are visible at varying distances within the view, forming localised points of verticality and interest to the view. Upper portions of vegetation, including trees, form the elevated, perceived, horizon within the view whilst views of agricultural land beyond are screened. The view is considered to be representative of southern, peripheral views experienced by road users traveling west on the L1025, though the view is also considered to be experienced by recreational receptors using the road network in the immediate vicinity and residential receptors to the rear of the viewpoint.
Sensitivity	Transient road users on the L1025 are judged to be of a medium susceptibility to change in their views, whilst recreational and residential receptors in the vicinity are judged to be of a high susceptibility to change in their views. The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route. The viewpoint is not located within an area identified from the OCDP as being either an AMA or an AHA. The overall value of the view available is judged to be medium. Overall, taking into account the receptor susceptibility and the value of the view the sensitivity is judged to be **medium.**
Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the formation of the Proposed Development will not be visible in the view due to screening effects of intervening vegetation cover. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be equivalent to a **No Change** scenario**.**
Magnitude of Change – Operational Phase	During the operational phase, prior to the successful establishment mitigation planting along the northern boundary of the Proposed Development site, the Proposed Development will not be visible in the view due to screening effects of intervening vegetation. Overall, the magnitude of visual impact during the operational phase prior to the successful establishment of hedgerows at the site entrance is judged to be equivalent to a **No Change** scenario.
Significance of Visual Effect during Construction Phase	**No Change**
Significance of Visual Effect during Operational Phase	**No Change**

Table 13: Viewpoint 5: Barnaboy

Viewpoint 5 – Barnaboy			
Grid Ref	643007, 730011	**Existing Viewpoint Location**	Appendix B: VP5 – Barnaboy

Viewpoint 5 – Barnaboy			
Direction of View	West	**Approx Distance to Proposed Development**	1.655 km

Description of existing view and potential receptors	This viewpoint is located on a local road access at Barnaboy, approximately 1.655 km east of the eastern boundary of the Proposed Development site. The existing view available from this location (refer to Appendix B, VP01 – Barnaboy; Existing View) is generally open and panoramic in nature, though partially at mid-distance by a combination of localised topographical changes and intervening field boundary hedgerows. The immediate foreground of the view is comprised of a single agricultural field with boundaries well defined by existing hedgerows. Perceived horizons, formed by existing vegetation, are locally punctuated and elevated by canopies of existing field boundary trees. Timber poles carrying overhead lines are visible within the view at a variety of distances, with overhead lines forming a perceived horizon across the central mid-distance portion of the view. A single residential property is visible to the right of the view, with lower portions partially screened by existing hedgerows. Distant horizons are largely obscured in the view, however where present are formed by upper canopies of vegetation. The view is considered to be representative of peripheral views experienced primarily by local road users, though the view is also considered to be experienced by recreational receptors using the road network and residential receptors in the immediate vicinity.
Sensitivity	Residential and recreational receptors are judged to be of a high susceptibility to change in their views, whilst transient receptors on the local access road are judged to be of a medium susceptibility to change in their views. The viewpoint does not represent a recognised stopping place and does not form part of a recognised tourist route. The viewpoint is not located within an area identified from the OCDP as being either an AMA or an AHA. The overall value of the view available is judged to be medium. Overall, taking into account the receptor susceptibility and the value of the view the sensitivity is judged to be **medium.**
Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the formation of the Proposed Development will not be visible in the view due to combined screening effects of intervening topographical changes and intervening vegetation cover. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be equivalent to a **No Change** scenario**.**
Magnitude of Change – Operational Phase	During the operational phase the Proposed Development will not be visible in the view due to screening effects of intervening topographical change and intervening vegetation cover. Overall, the magnitude of visual impact during the operational phase is judged to be equivalent to a **No Change** scenario.
Significance of Visual Effect during Construction Phase	**No Change**
Significance of Visual Effect during Operational Phase	**No Change**

Table 14: Viewpoint 6: Grand Canal Way

Viewpoint 6 – Grand Canal Way			
Grid Ref	639473, 725564	**Existing Viewpoint Location**	Appendix B: VP06 – Grand Canal Way
Direction of View	North-east	**Approx Distance to Proposed Development**	3.43 km

Description of existing view and potential receptors	This viewpoint is located on the hard surfaced track, immediately north of the Grand Canal, which forms part of the Grand Canal Greenway, approximately 3.43 km south of the Proposed Development. The existing view available from this location (refer to Appendix B, VP06 – Grand Canal Way; Existing View) is generally panoramic in nature, though partially restricted within the foreground by hedgerow vegetation forming the boundary of the adjacent field. Mid-distance portions of the view are arable fields, with fields well defined by hedgerows of varying quality. Mid-distance and more distant portions of the view are characterised by extensive mixed species woodland areas, which obscure lands beyond. Existing horizons are formed by upper canopies of tree cover visible in the view, which are locally punctuated by tree canopies located at mid-distance within the view. Timber poles carrying overhead lines form a minor element of the view and are often difficult to perceive as they are often viewed against a strongly vegetated background which aids integration into the view. The view is considered to be representative of northern views experienced by recreational receptors on the Grand Canal Greenway only, as views from the Grand Canal itself are restricted by existing vegetation cover.
Sensitivity	Recreational receptors on the Grand Canal Way are judged to be of a high susceptibility to change in their views. The viewpoint does represent views from a recognised tourist route and is located within an area identified from the OCDP as an AHA and the overall value of the view available is judged to be high. Overall, taking into account the receptor susceptibility and the value of the view the sensitivity is judged to be **High.**
Magnitude of Change – Construction Phase	During the construction phase, operations and machinery movements associated with the formation of the Proposed Development will not be visible in the view due to screening effects of intervening vegetation cover. Overall, the magnitude of change during the construction phase of the Proposed Development is judged to be equivalent to a **No Change** scenario**.**
Magnitude of Change – Operational Phase	During the operational phase the Proposed Development will not be visible in the view due to screening effects of intervening vegetation cover. Overall, the magnitude of visual impact during the operational phase is judged to be equivalent to a **No Change** scenario.
Significance of Visual Effect during Construction Phase	**No Change**
Significance of Visual Effect during Operational Phase	**No Change**

Table 15 below summarises the predicted significance of visual effect for each of the previously assessed viewpoints.

Table 15: Summary of Predicted Visual Effects for Viewpoints

Viewpoint		Predicted Construction Phase Visual Impacts	Predicted Operational Phase Visual Impacts
1	Derrygrogan Little Road (Site Entrance)	Localised **Minor**, short-term temporary, assessed as not significant visual effects.	Localised **Minor**, medium term, reversible visual effects assessed as not significant, predicted to be experienced during the initial operational phase reducing to **Negligible**, long term, reversible, assessed as not significant as mitigation planting establishes.
2	Derrygrogan Little Road	Localised Negligible to Minor, short-term temporary, assessed as **Negligible** and not significant visual effects.	Localised Negligible to Minor, medium term, reversible effects assessed as **Negligible** and not significant visual effects predicted to be experienced during the initial operational phase reducing to equivalent of **No Change** scenario as mitigation planting establishes.
3	Kilmurry Bog Walk & Nature Trail	Localised Major to Substantial, short-term temporary, assessed as **Major** significant visual effects.	Localised Major to Substantial, assessed as **Major**, medium term, reversible effects assessed as significant, predicted to be experienced during the initial operational phase of the Proposed Development reducing to **Minor**, long term, reversible, assessed as not significant visual effects.
4	L1025 road to Tullamore	**No Change**	**No Change**
5	Barnaboy	**No Change**	**No Change**
6	Grand Canal Way	**No Change**	**No Change**

1.7.1 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 localised topographical changes that reduces visibility of and / or visually screens the Proposed Development in views and the Proposed Development is readily absorbed into the landscape and no significant visual effects are predicted for properties beyond 500m.

It should be noted that a separate Residential Visual Amenity Visual Assessment (RVAA) has not been undertaken as part of this LVIA, as it is considered unlikely that the threshold for an RVAA will be reached during either the construction phase or operational phase of the Proposed Development.

Following a detailed review of available information, site works and an examination of the ZTV associated with the Proposed Development is has been established that there are several residential properties lying within 500m of the Proposed Development, located along the L1025 to the north and north-west, Derrygrogan Little Road to the west and southwest and Kilmurray to the north which may experience visibility of the Proposed Development. These have been identified as follows on Figure 1.7 (refer Appendix A; Figure 1.7);

1. Property Nr's 1 to 6 inclusive that lie immediately north of local road L1025;
2. Property Nr's. 7 to 9 inclusive that lie south of Kilmurry;

3. Property Nr's. 10 to 17 inclusive that lie immediately adjacent to local road L1025, west of Derrygrogan Little Road; and
4. Property Nr's. 18 to 26 inclusive that lie adjacent to Derrygrogan Little Road, west of the Proposed Development site.

For the purposes of the following residential assessments, residential receptors are considered to be of a high sensitivity to changes in views.

1.7.1.1 Properties 1 to 6 on L1025

Residential properties adjacent to the L1025, north of the Proposed Development site are a mix of 2 storey and single storey residential dwellings orientated to face the L1025, with garden boundaries well defined, in many instances, by well-established garden boundary vegetation which includes evergreen hedgerows.

As evidenced in the photomontage from Viewpoint 4 (refer Appendix B; VP 04 L1025 road to Tullamore; Photomontage) the site and elements of the Proposed Development will be screened in southern views by existing vegetation that lies between these properties and the northern boundary of the site.

It was also observed during site works, that southern views from Property 2 are further restricted by mature vegetation, including trees, which forms the southern boundary to the property.

For the 6 properties identified adjacent to the L1025 the predicted magnitude of visual impact is judged to be **No Change** as intervening vegetation cover screens proposed elements of the development in southern views.

1.7.1.2 Properties 7 to 9 south of Kilmurry

Residential properties identified to the north of the L1025, south of Kilmurry are generally single storey dwelling, which are orientated west / east such that primary views are towards the local road network.

It was observed during site works that existing vegetation in the vicinity of property Nr. 7 screens southern views, such that the Proposed Development would not be visible from this location in southern views.

Garden boundary vegetation associated with the southern boundary of property Nr. 8 is comprised of a tall hedgerow, which screens southern views from within the amenity area associated with the property, such that the Proposed Development would not be visible in southern views.

The single storey dwelling identified at location 9 (refer Appendix A; Figure 1.20 is orientated west/ east such that the main façade of the dwelling faces east towards the local road and with southern views towards the Proposed Development site partially screened by intervening farm outbuildings. Whilst the amenity space associated with this property is defined along the southern boundary by a low timber fence, site works have established that the Proposed Development site is not visible in peripheral views due to a combination of screening provided by intervening built form and existing field boundary hedgerows and trees.

For the three properties identified the predicted magnitude of visual impact is judged to be **No Change** as intervening vegetation cover screens proposed elements of the development in southern views.

1.7.1.3 Properties 10 to 17 on L1025 west of Derrygrogan Little Road

Residential properties adjacent to the L1025, west of Derrygrogan Little Road are comprised of single storey dwellings with a variety of boundary types defining the front garden amenity space adjacent to the L1025. Boundary definition is provided by a variety of treatments, including well established garden hedges, low walls and timber fencing with horizontal timber rails.

It was observed during site works that peripheral, southeastern views from the property identified at Nr. 16 are restricted by existing hedgerows which form the boundary of the property along the northern edge of the L1025. Whilst the Proposed Development may be theoretically visible in southeastern views, it is considered that elements of the Proposed Development will not be perceived in available views due to screening effects of

existing vegetation and build development along the Derrygrogan Little Road, which is partially visible in the available views.

For the 8 properties identified adjacent to the L1025, west of Derrygrogan Little Road the predicted magnitude of visual impact is judged to be No Change as intervening vegetation cover screens proposed elements of the development in southern views.

1.7.1.4 Properties 18 to 26 on Derrygrogan Little Road

Residential properties adjacent to the Derrygrogan Little Road, west of the Proposed Development site are a mix of 2 storey and single storey residential dwellings generally orientated to face the Derrygrogan Little with garden boundaries defined, in many instances, by well-established garden boundary vegetation which includes hedgerows.

As evidenced in the photomontages from Viewpoint 1 and Viewpoint 2 (refer Appendix B; Vp 01 and Vp 02; Photomontage Views) the site for the Proposed Development is not easily discernible in eastern views due to screening provided by field boundary hedgerows and field boundary hedgerows with mature trees. Where gaps in existing vegetation permit views of agricultural land beyond, the Proposed Development would be difficult to perceive and not readily viewed as an obvious change to the view. It was also observed during site works, that eastern views from Property 21 are further restricted by mature vegetation, including trees, which forms the western boundary of the Derrygrogan Little Road

For properties identified at location 18 to 22, the predicted magnitude of visual impact is judged to be **No Change** as intervening vegetation cover screens proposed elements of the development in eastern views.

For properties identified at location 23 to 26, the predicted magnitude of visual effect is judged to be **negligible**, giving rise to a negligible and not significant localised visual impact during the initial operational phase of the Proposed Development prior to the successful establishment of planting associated with the site access. Following the successful establishment of planting the significance of visual effect is considered to reduce to the equivalent of a **No Change** scenario as established mitigation planting strengthens existing boundary vegetation and obscures perceived portions of the Proposed Development beyond.

1.8 Mitigation

1.8.1 Landscaping Aims and Objectives

Localised significant visual effects have been predicted to be experienced from portions of the Kilmurry Bog Walk & Nature Trail which lies to the immediate north of the Proposed Development site, with limited visibility of the Proposed Development predicted to be experienced in eastern view from residential properties adjacent to Derrygrogan Little Road (properties 23 to 26 identified on Appendix A; Figure 1.7) and visibility of the site access from localised portions of the Derrygrogan Little during the initial operational phase of the Proposed Development.

To mitigate predicted visual impacts arising because of the Proposed Development and as an aid to integrating the scheme into the surrounding landscape context the following soft landscape interventions have been included within the overall proposals. Refer to the Landscape Mitigation Plan that accompanies the planning application:

- Drawing Nr 02898-RPS-ZZ-ZZ-DR-L-50001

The following text sets out the aims of the embedded soft landscape interventions but the role of the landscape architect in design evolution must also be noted.

1.8.1.1 Landscaping Aims

- To protect the existing landscape features, such as field boundary vegetation, to integrate the Proposed Development and associated infrastructure physically and visually into the surrounding landscape; and
- Provide suitable screening measures to minimise and/ or reduce predicted visual intrusion, particularly in views from close receptors.

1.8.1.2 General Objectives

- Retain, were practicably feasible, existing hedgerows, trees and roadside vegetation on peripheral and internal field boundaries in accordance with BS5837:2012 Trees in relation to design, demolition, and construction - Recommendations.
- Soft landscape mitigation proposals should be reflective of and in keeping with the surrounding landscape features.
- Locally appropriate native tree, shrub and hedgerow species shall be selected for inclusion within soft landscape mitigation proposals to ensure successful plant establishment and to aid integration of the proposals with the surrounding landscape context.

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 Cumulative Impacts

In relation to permitted and proposed developments identified in **Table 7** previously, the following identified developments have been assessed for cumulative impacts, and it is noted that a landscape and visual appraisal has been included in the submitted information for the identified sites.

1.9.1 Proposed Developments

As identified previously in Section 1.2.15 several Consented Developments of a similar nature and scale lie in proximity to the Proposed Development site which, in combination with the Proposed Development, may give rise to cumulative landscape and visual effects to a variety of receptor groups within the vicinity of the Proposed Development.

It is considered that the Proposed Development would increase and extend the influence of renewable development when viewed in combination with existing infrastructure such as timber poles and overhead lines, however the influence of the Proposed Development is very localised in nature due to screening provided by existing field boundary hedgerows, field boundary hedgerows with mature trees, linear woodland features and areas of mixed woodland located throughout the LVIA Study Area.

1.9.1.1 Consented Scheme Derrygrogan Big Solar Farm - Application Nr. 22/378

1.9.1.1.1 Cumulative Landscape Effects

This conditionally consented solar farm, covering 73.9 hectares is located approximately 0.2km south-west of the Proposed Development site and is within the existing rural setting of Offaly. This consented development is located on lands which have been classified within the OCDP as being a Low Sensitivity Areas, which are classified by the OCDP as "*robust landscapes which are tolerant to change…"* and at the time of writing this report is yet to be constructed.

It is considered that this consented scheme (Application Nr. 22/378) in combination with the Proposed Development would increase the perception of solar farm development within this part of Offaly. Although the Proposed Development is in proximity to this Consented Development, intervening vegetation between the two development sites will effectively screen both developments such that consented and proposed developments will not be seen in combined, sequential or perceived in successive views within this rural and agricultural area.

1.9.1.1.2 Cumulative Visual Effects

As evidenced by the annotated cumulative outline images (refer Appendix B) it is considered that there will be no cumulative visual interactions between this consented solar farm and the Proposed Development due to screening provided by existing field boundary hedgerows and trees that surround the Proposed Development site. The additional woodland, tree, shrub and hedgerow planting proposed as part of the mitigation measures associated with the Proposed Development will further reduce the potential for combined intervisibility, with adverse cumulative visual effects considered to be not significant once proposed planting has become established.

1.9.1.2 Consented and Amended Scheme Ballyteige Solar Farm - Application Nr. 21/98

1.9.1.2.1 Cumulative Landscape Effects

This conditionally consented solar farm, covering 60.53 hectares is located approximately 5km south-west of the Proposed Development site and is also located within the existing rural setting of Offaly. This consented development is located on lands which have been classified within the OCDP as being a Low Sensitivity Areas, which are classified by the OCDP as "*robust landscapes which are tolerant to change…"* and at the time of writing this report is yet to be constructed.

It is considered that this consented scheme (Application Nr. 21/98) in combination with the Proposed Development would increase the perception of solar farm development within this part of Offaly. Although the Proposed Development lies within 5 km of the Consented Development, intervening vegetation and localised topographical changes between the two development sites will screen both developments such that consented and proposed developments will not be seen in combined, sequential or perceived in successive views within this rural and agricultural area.

It is considered that the proposed amended scheme in combination with the Proposed Development would not alter the predicted cumulative landscape and visual effects predicted to occur for the consented scheme (Application Nr. 21/98). Although the Proposed Development lies within 5 km of the amended application site, intervening vegetation and localised topographical changes between the two development sites will screen both developments such that consented and proposed developments will not be seen in combined, sequential or perceived in successive views within this rural and agricultural area.

1.9.1.2.2 Cumulative Visual Effects

As evidenced by the annotated cumulative outline images (refer Appendix B) it is considered that there will be no cumulative visual interactions between this consented solar farm and the Proposed Development due to screening provided by existing field boundary hedgerows and trees that surround the Proposed Development site. The additional woodland, tree, shrub and hedgerow planting proposed as part of the mitigation measures associated with the Proposed Development will further reduce the potential for combined intervisibility, with adverse cumulative visual effects considered to be not significant once proposed planting has become established.

1.9.1.3 Consented Scheme Derries Solar Farm - Application Nr. 21/8

1.9.1.3.1 Cumulative Landscape Effects

This conditionally consented solar farm, covering 53.7 hectares is located approximately 1.8 km north of the Proposed Development site and is also located within the existing rural setting of Offaly. This consented development is located on lands which have been classified within the OCDP as being of a Moderate Sensitivity, which are classified by the OCDP as being areas of landscape which "*can accommodate development pressure but with limitations in the scale and magnitude"* and at the time of writing this report the consented development is yet to be constructed.

It is considered that this consented scheme (Application Nr. 21/8) in combination with the Proposed Development would increase the perception of solar farm development within this part of Offaly. Although the Proposed Development lies within 2 km of the Consented Development, intervening vegetation and localised topographical changes between the two development sites will mean that the Proposed Development is not viewed in combined, sequential or perceived in successive views within this rural and agricultural area.

1.9.1.3.2 Cumulative Visual Effects

As evidenced by the annotated cumulative outline images (refer Appendix B) it is considered that there will be no cumulative visual interactions between this consented solar farm and the Proposed Development due to screening provided by existing field boundary hedgerows and trees that surround the Proposed Development site. The additional woodland, tree, shrub and hedgerow planting proposed as part of the mitigation measures associated with the Proposed Development will further reduce the potential for combined intervisibility, with adverse cumulative visual effects considered to be not significant once proposed planting has become established.

1.9.1.4 Proposed Colehill Substation Development

1.9.1.4.1 Cumulative Landscape Effects

This proposed substation development is located approximately 3.7 km south-west of the Proposed Development site and is located within the existing rural setting of Offaly. This proposed development is located on lands which have been classified within the OCDP as being a Low Sensitivity Areas, which are classified by the OCDP as "*robust landscapes which are tolerant to change…"* and at the time of writing this report is yet to be constructed.

It is considered that this proposed scheme will be read in combination with the consented scheme (Application Nr. 21/98) and its amended layout, increasing the perception of electrical development in the vicinity when read in combination with existing overhead lines within this rural portion of Offaly. Although the Proposed Development lies within 4km of this proposed development, intervening vegetation and localised topographical changes between the two development sites will mean that the Proposed Development is not viewed in combined, sequential or perceived in successive views within this rural and agricultural area.

1.9.1.4.2 Cumulative Visual Effects

As evidenced by the annotated cumulative outline images (refer Appendix B) it is considered that there will be no cumulative visual interactions between this proposed development and the Proposed Development due to screening provided by existing field boundary hedgerows and trees that surround the Proposed Development site. The additional woodland, tree, shrub and hedgerow planting proposed as part of the mitigation measures associated with the Proposed Development will further reduce the potential for combined intervisibility, with adverse cumulative visual effects considered to be not significant once proposed planting has become established.

1.10 Conclusion

The Proposed Development is wholly located within the rural landscape associated with County Offaly, within lands that have been categorised as Low Sensitivity Areas which are described as being "*robust landscapes which are tolerant to change, such as the county's main urban and farming areas, which have the ability to accommodate development*. A review of the Proposed Development location against the County Offaly Development Plan (CODP) has also identified that the lands associated with the site for the Proposed Development are not designated or protected.

No significant landscape effects are predicted to arise during the construction phase or the initial operational phase associated with the Proposed Development, as vegetation removal required to facilitate the Proposed Development access and internal track is limited in extent and is not readily perceived in the wider landscape due to screening effects of retained vegetation forming the site boundaries in combination with localised topographical changes and further screening provided by existing vegetation cover in the wider landscape context.

Of the 6 viewpoints assessed for construction and operational phase impacts arising because of the Proposed Development, a single viewpoint is predicted to experiencing significant visual impacts during the construction phase and initial operational phase of the Proposed Development. Predicted visual impacts are considered to reduce in the medium-term, to not significant, as mitigation planting associated with the Proposed Development integrates and screens the development in views from the assessment viewpoint. Remaining viewpoints are predicted to experience no significant visual effects during the construction phase or the initial operational phase due to a combination of localised topographical changes and screening effects produced by intervening vegetation cover.

An assessment has been undertaken for residential receptors in proximity to the Proposed Development, for both construction and operational phases of the Proposed Development. Following site works and assessment of the potential visual impacts arising because of the Proposed Development it is predicted that none of the residential receptors assessed will experience significant effects during the construction phase or operational phase of the Proposed Development. Existing vegetation cover between receptor locations and the Proposed Development restricts the visibility of the Proposed Development, such that predicted effects are not significant, or that the Proposed Development is not visible in the available view.

An assessment has been undertaken in relation to potential cumulative landscape and visual impacts arising because of the Proposed Development in combination with consented and proposed developments in proximity. The assessment has concluded that due to intervening vegetation combined with localised topographical changes that the Proposed Development will not be visible or experienced in combination with any of the other proposed or consented development included in the cumulative assessment.

Appendix A – Accompanying Figures

Legend

Red Line Boundary

TETRA TECH
rps
Elmwood House
74 Boucher Road
Belfast
BT12 6RZ
T +44(0) 28 90 667914
F +44(0) 28 90 668286
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

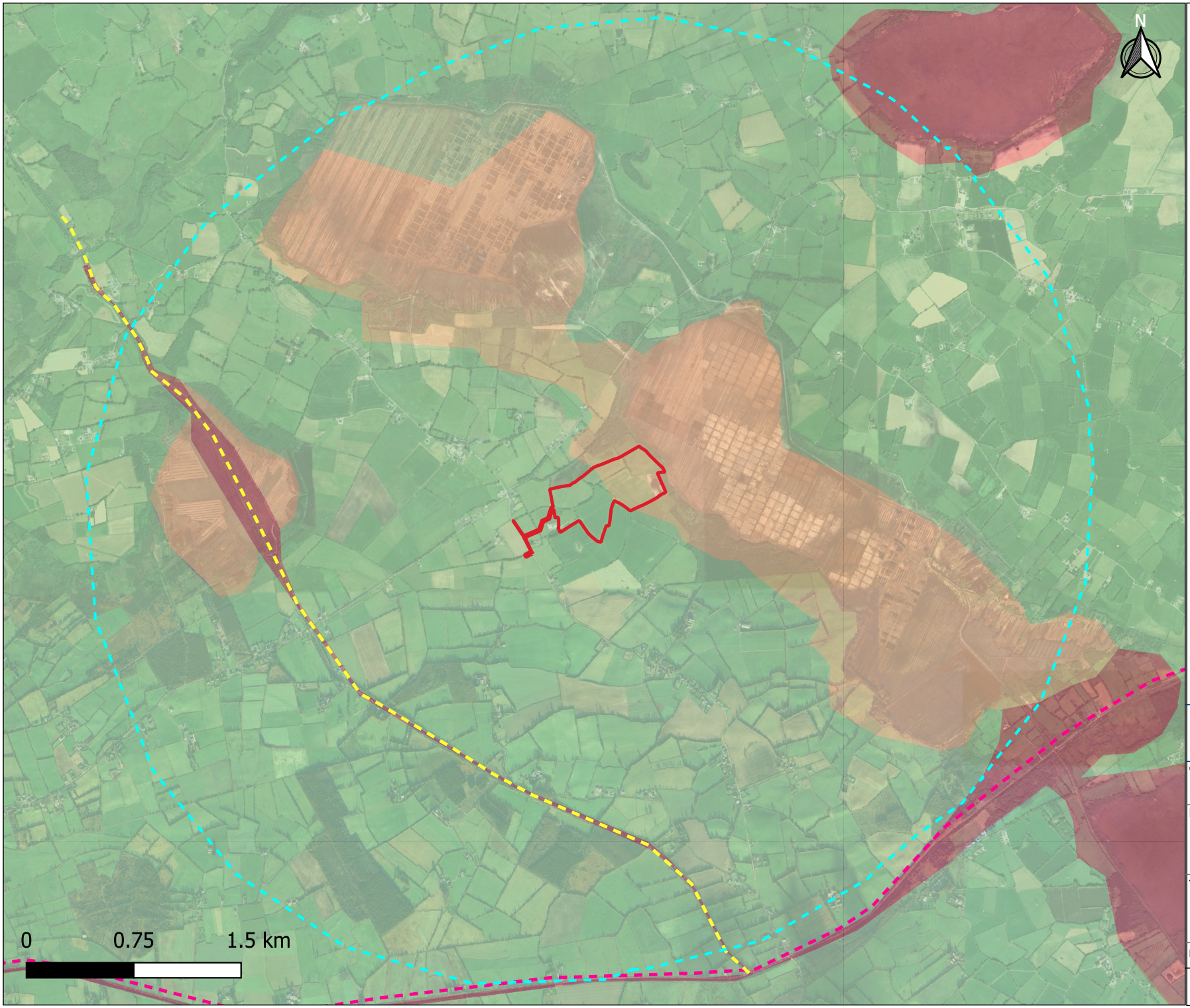
Client: Renewable Energy Systems Limited

Project: Derrygrogan Little Solar Farm

Title: Site Location

Figure No. 1.2

Project Ref	Date	Revision
794-NI-P&E-02898	Dec 2025	01



Legend

- Red Line Boundary
- 3km Buffer
- High Landscape Sensitivity
- Medium Landscape Sensitivity
- Low Landscape Sensitivity
- Grand Canal Greenway
- Kilbeggan Spur Walk

TETRA TECH
rps
Elmwood House
74 Boucher Road
Belfast
BT12 6RZ
T +44(0) 28 90 667914
F +44(0) 28 90 668286
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

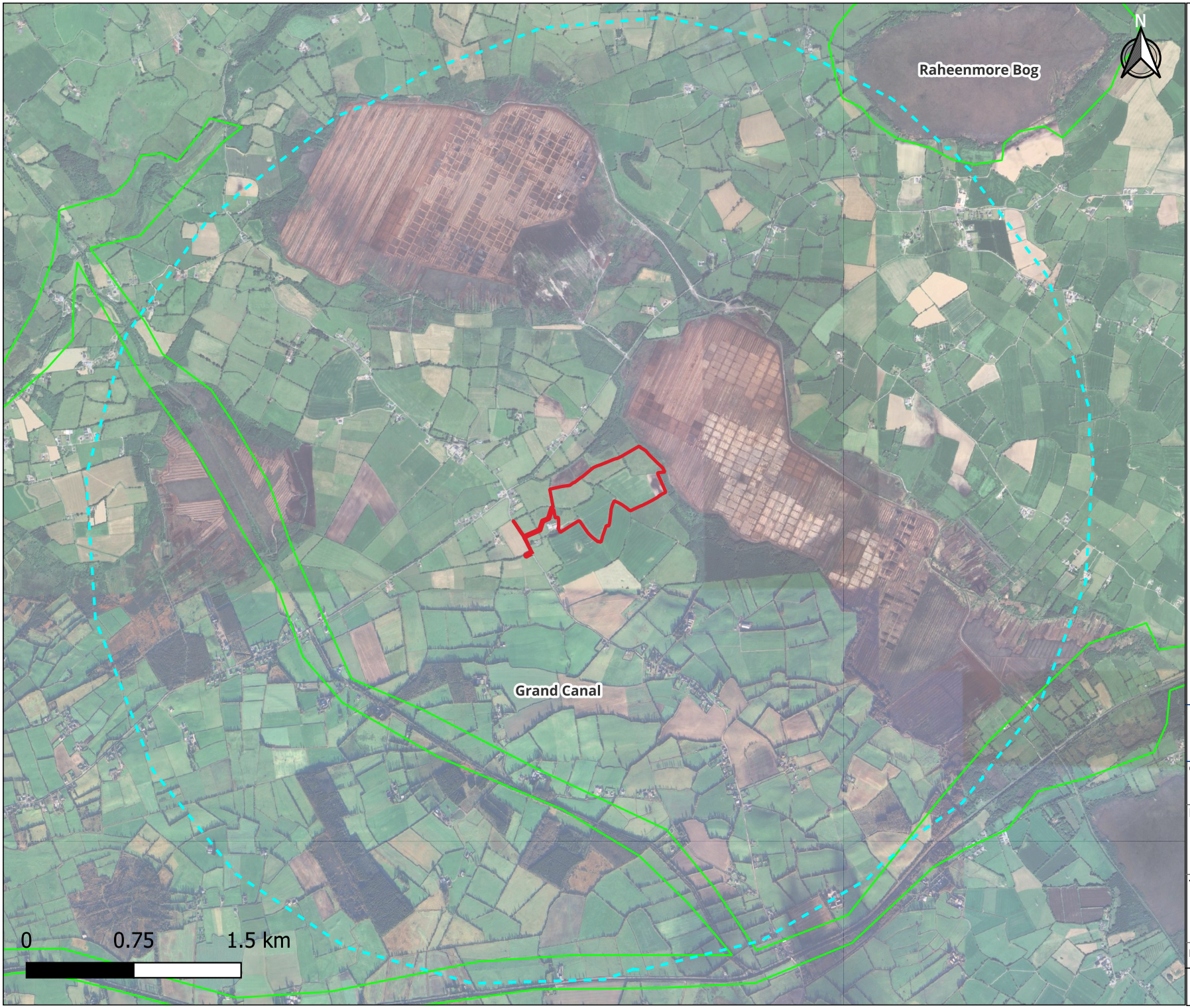
Client: Renewable Energy Systems Limited

Project: Derrygrogan Little Solar Farm

Title: Landscape Sensitivity

Figure No. 1.3

Project Ref	Date	Revision
794-NI-P&E-02898	Dec 2025	Draft



Legend

- Red Line Boundary
- 3km Buffer
- Indicative Areas of High Amenity

TETRA TECH
rps
Elmwood House
74 Boucher Road
Belfast
BT12 6RZ
T +44(0) 28 90 667914
F +44(0) 28 90 668286
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

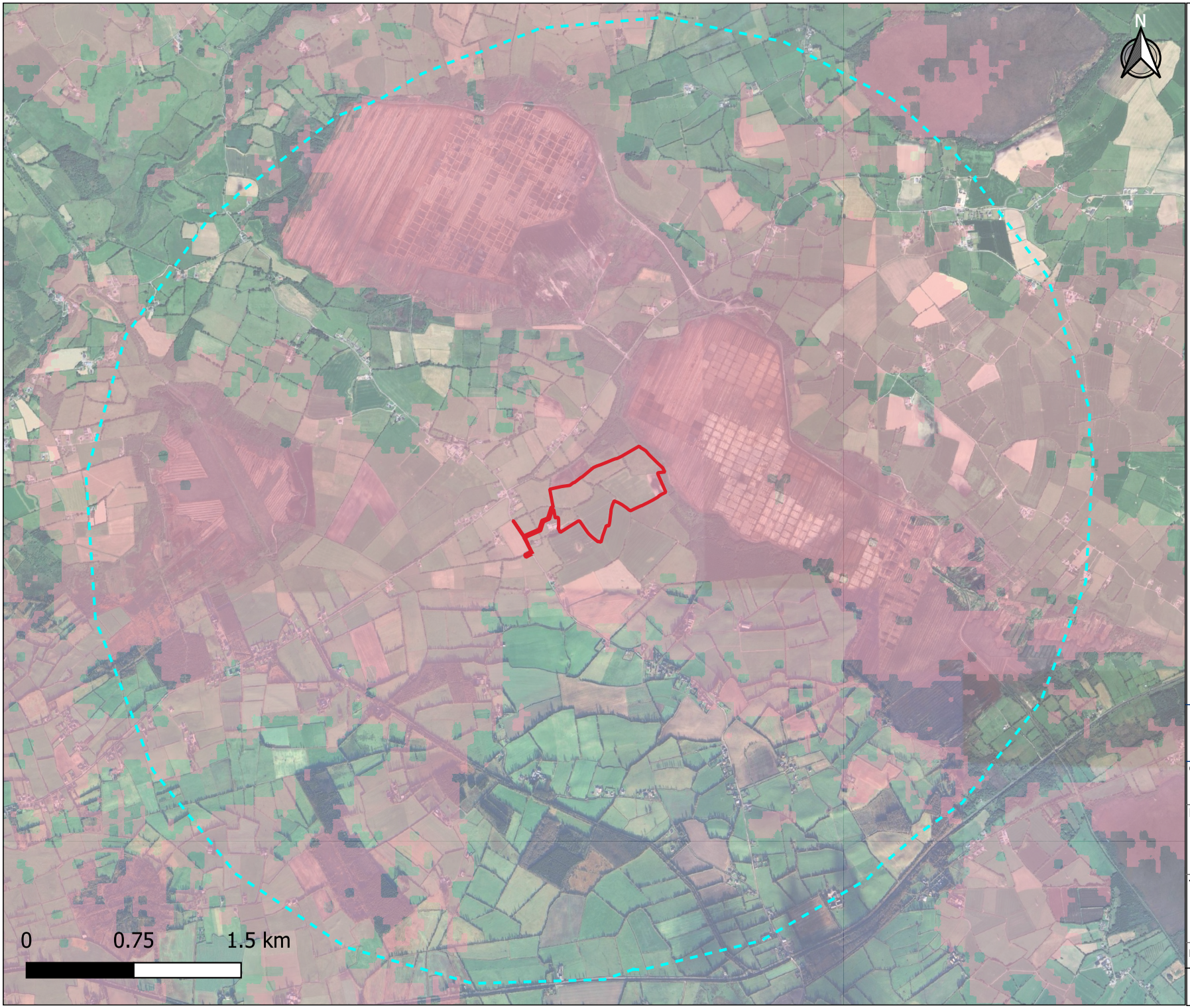
Client: Renewable Energy Systems Limited

Project: Derrygrogan Little Solar Farm

Title: Areas of High Amenity

Figure No. 1.4

Project Ref	Date	Revision
794-NI-P&E-02898	Dec 2025	Draft



Legend

- Red Line Boundary
- 3km Buffer
- Zone of Theoretical Visibility

The ZTV is based on bare-earth 10 m DTM mapping and using 3.5 m high panels, at the highest location within the site. It does not include for vegetation, buildings or other structural features which might screen the view.

TETRA TECH
rps
Elmwood House
74 Boucher Road
Belfast
BT12 6RZ
T +44(0) 28 90 667914
F +44(0) 28 90 668286
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

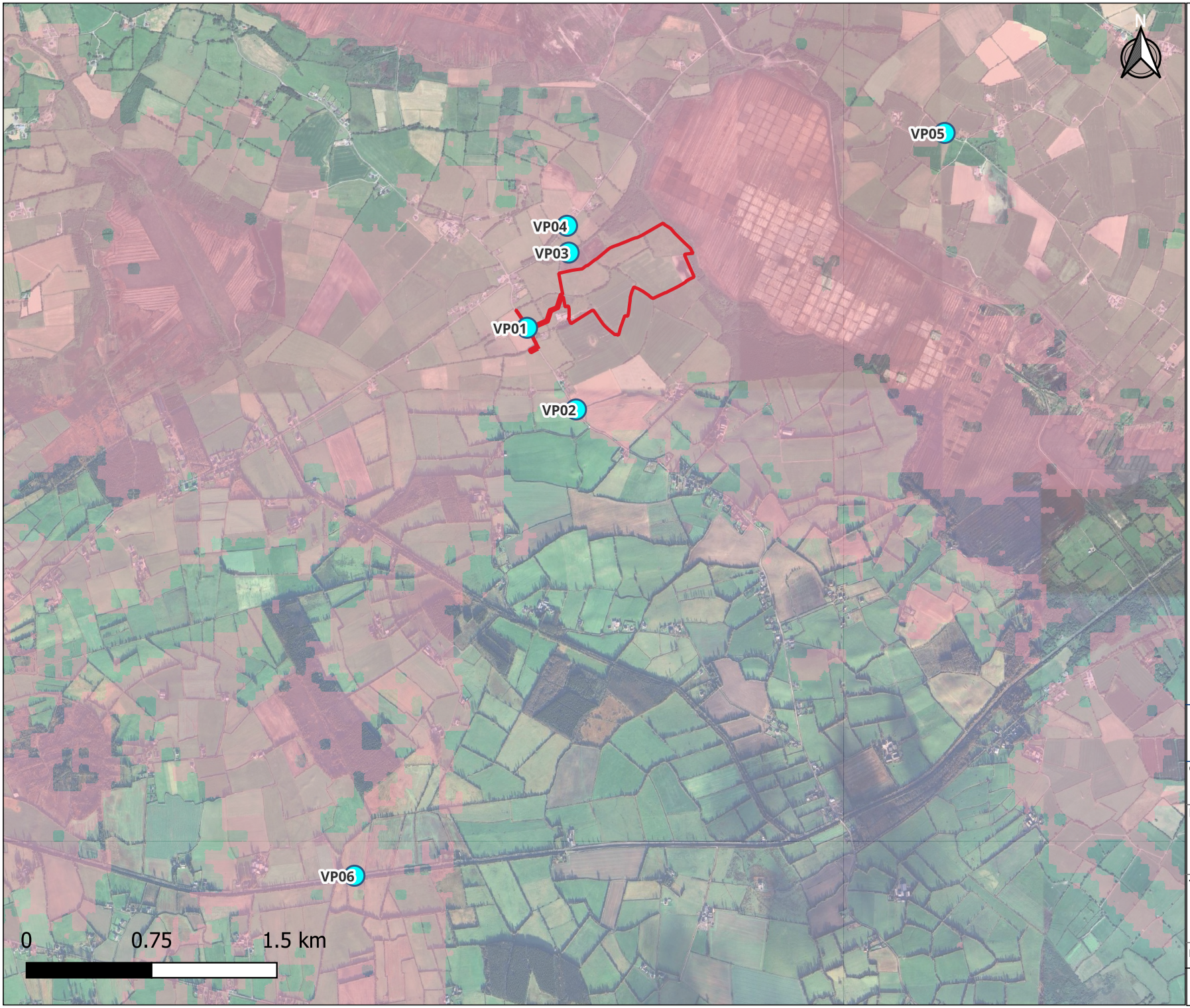
Client: Renewable Energy Systems Limited

Project: Derrygrogan Little Solar Farm

Title: Zone of Theoretical Visibility

Figure No. 1.5

Project Ref	Date	Revision
794-NI-P&E-02898	Dec 2025	Draft



Legend

- Red Line Boundary
- Zone of Theoretical Visibility
- Viewpoint Location

VP01	Derrygrogan Little Entrance
VP02	Derrygrogan Little
VP03	Kilmurry Bog Walk & Nature Trail
VP04	At houses on road to Kilclonfer
VP05	Barnaboy
VP06	Grand Canal Way

The ZTV is based on bare-earth 10 m DTM mapping and using 3.5 m high panels, at the highest location within the site. It does not include for vegetation, buildings or other structural features which might screen the view.

TETRA TECH
rps
Elmwood House
74 Boucher Road
Belfast
BT12 6RZ
T +44(0) 28 90 667914
F +44(0) 28 90 668286
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

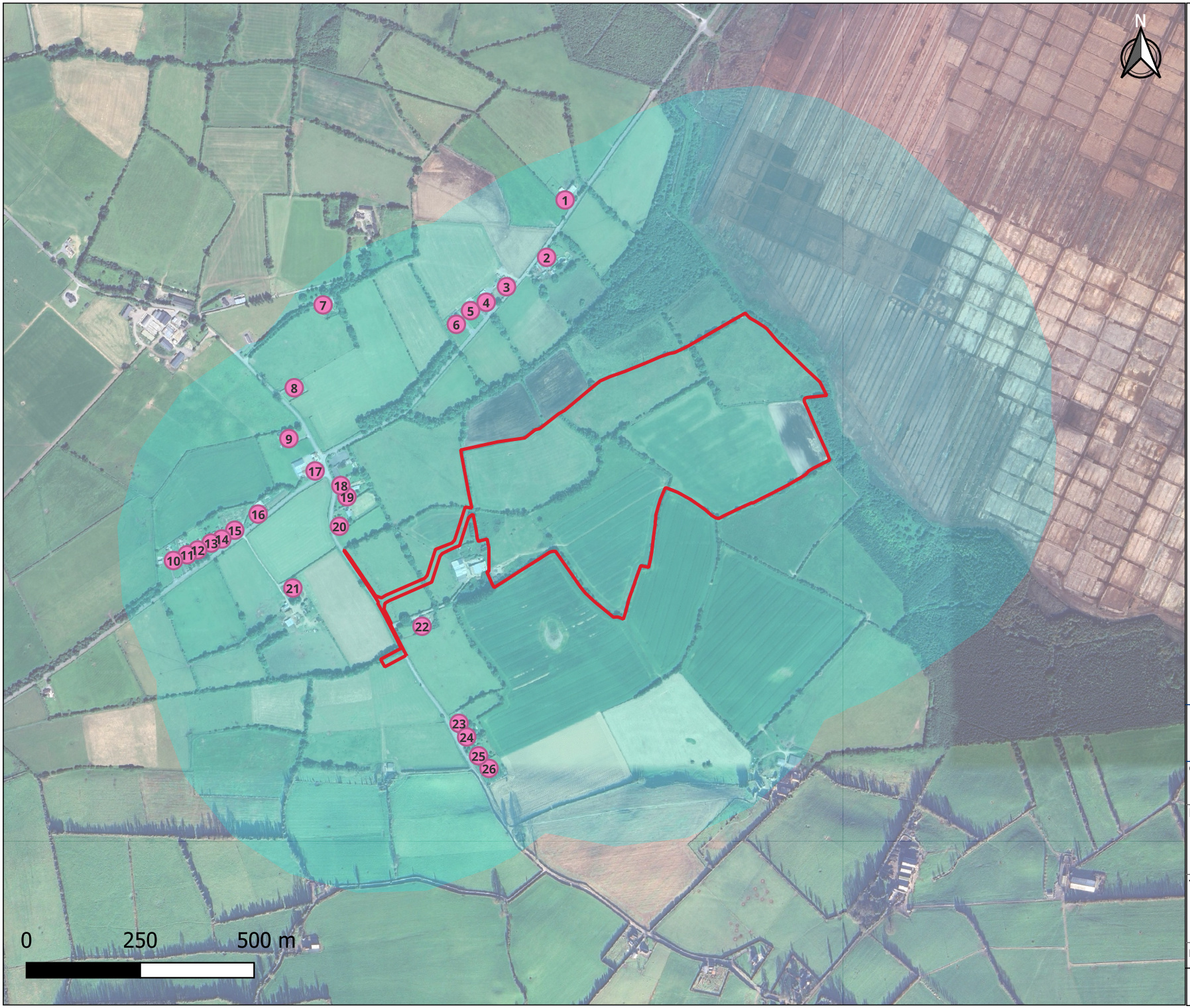
Client: Renewable Energy Systems Limited

Project: Derrygrogan Little Solar Farm

Title: Zone of Theoretical Visibility & Viewpoint Locations

Figure No. 1.6

Project Ref	Date	Revision
794-NI-P&E-02898	Dec 2025	Draft



Legend

- Red Line Boundary
- 500m Buffer
- Residential Receptor

TETRA TECH
rps
Elmwood House
74 Boucher Road
Belfast
BT12 6RZ
T +44(0) 28 90 667914
F +44(0) 28 90 668286
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

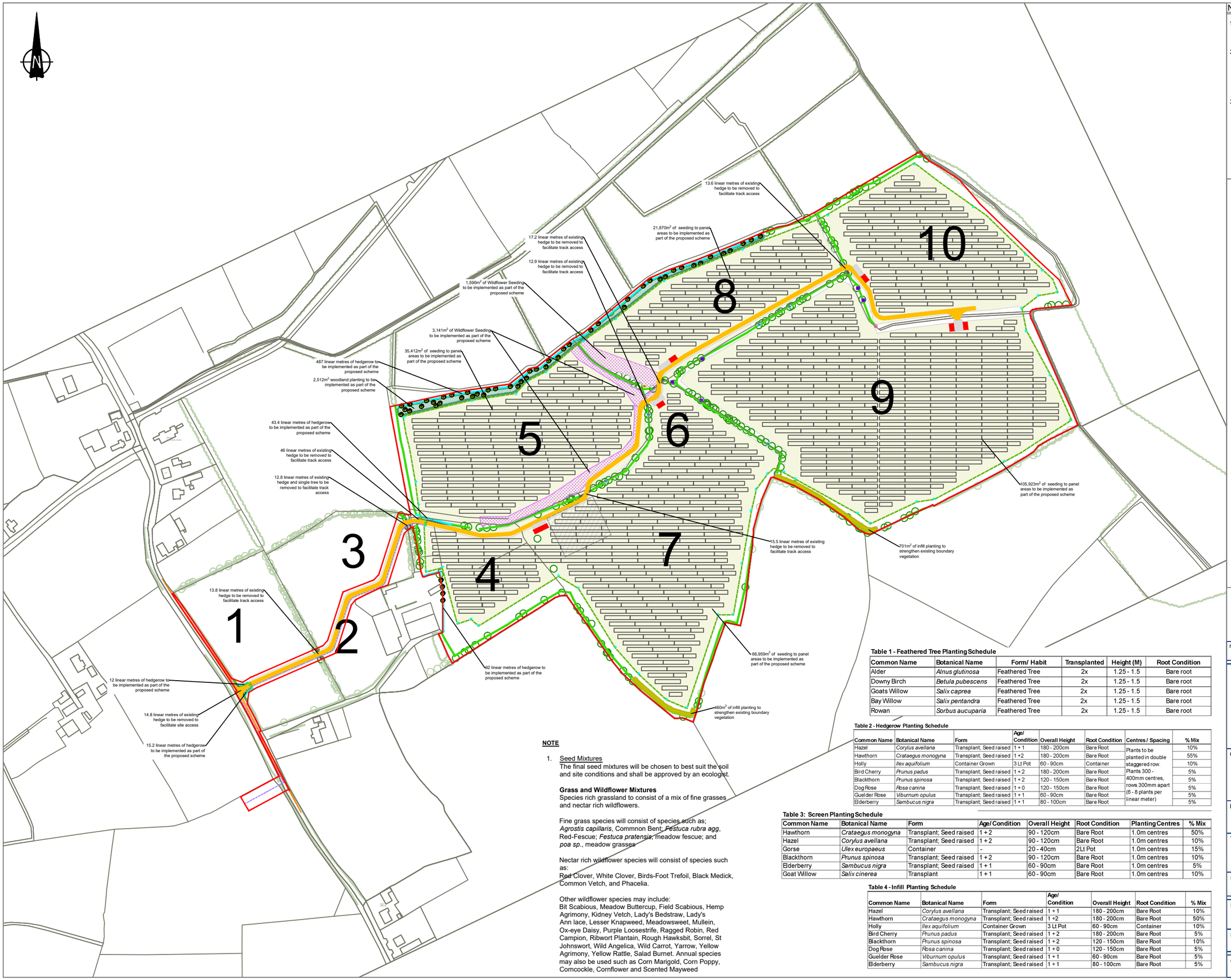
Client: Renewable Energy Systems Limited

Project: Derrygrogan Little Solar Farm

Title: Residential Receptors within 500m Buffer

Figure No. 1.7

Project Ref	Date	Revision
794-NI-P&E-02898	Dec 2025	01



NOTE

1. Seed Mixtures
The final seed mixtures will be chosen to best suit the soil and site conditions and shall be approved by an ecologist.

Grass and Wildflower Mixtures
Species rich grassland to consist of a mix of fine grasses and nectar rich wildflowers.

Fine grass species will consist of species such as; *Agrostis capillaris*, Commnon Bent; *Festuca rubra agg*, Red-Fescue; *Festuca pratensis*, meadow fescue; and *poa sp.*, meadow grasses

Nectar rich wildflower species will consist of species such as:
Red Clover, White Clover, Birds-Foot Trefoil, Black Medick, Common Vetch, and Phacelia.

Other wildflower species may include:
Bit Scabious, Meadow Buttercup, Field Scabious, Hemp Agrimony, Kidney Vetch, Lady's Bedstraw, Lady's Ann lace, Lesser Knapweed, Meadowsweet, Mullein, Ox-eye Daisy, Purple Loosestrife, Ragged Robin, Red Campion, Ribwort Plantain, Rough Hawksbit, Sorrel, St Johnswort, Wild Angelica, Wild Carrot, Yarrow, Yellow Agrimony, Yellow Rattle, Salad Burnet. Annual species may also be used such as Corn Marigold, Corn Poppy, Corncockle, Cornflower and Scented Mayweed

Table 1 - Feathered Tree Planting Schedule

Common Name	Botanical Name	Form/ Habit	Transplanted	Height (M)	Root Condition
Alder	*Alnus glutinosa*	Feathered Tree	2x	1.25 - 1.5	Bare root
Downy Birch	*Betula pubescens*	Feathered Tree	2x	1.25 - 1.5	Bare root
Goats Willow	*Salix caprea*	Feathered Tree	2x	1.25 - 1.5	Bare root
Bay Willow	*Salix pentandra*	Feathered Tree	2x	1.25 - 1.5	Bare root
Rowan	*Sorbus aucuparia*	Feathered Tree	2x	1.25 - 1.5	Bare root

Table 2 - Hedgerow Planting Schedule

Common Name	Botanical Name	Form	Age/ Condition	Overall Height	Root Condition	Centres / Spacing	% Mix
Hazel	*Corylus avellana*	Transplant; Seed raised	1 + 1	180 - 200cm	Bare Root	Plants to be planted in double staggered row. Plants 300 - 400mm centres, rows 300mm apart (6 - 8 plants per linear meter)	10%
Hawthorn	*Crataegus monogyna*	Transplant; Seed raised	1 +2	180 - 200cm	Bare Root		55%
Holly	*Ilex aquifolium*	Container Grown	3 Lt Pot	60 - 90cm	Container		10%
Bird Cherry	*Prunus padus*	Transplant; Seed raised	1 + 2	180 - 200cm	Bare Root		5%
Blackthorn	*Prunus spinosa*	Transplant; Seed raised	1 + 2	120 - 150cm	Bare Root		5%
Dog Rose	*Rosa canina*	Transplant; Seed raised	1 + 0	120 - 150cm	Bare Root		5%
Guelder Rose	*Viburnum opulus*	Transplant; Seed raised	1 + 1	60 - 90cm	Bare Root		5%
Elderberry	*Sambucus nigra*	Transplant; Seed raised	1 + 1	80 - 100cm	Bare Root		5%

Table 3: Screen Planting Schedule

Common Name	Botanical Name	Form	Age/ Condition	Overall Height	Root Condition	Planting Centres	% Mix
Hawthorn	*Crataegus monogyna*	Transplant; Seed raised	1 + 2	90 - 120cm	Bare Root	1.0m centres	50%
Hazel	*Corylus avellana*	Transplant; Seed raised	1 + 2	90 - 120cm	Bare Root	1.0m centres	10%
Gorse	*Ulex europaeus*	Container	-	20 - 40cm	2Lt Pot	1.0m centres	15%
Blackthorn	*Prunus spinosa*	Transplant; Seed raised	1 + 2	90 - 120cm	Bare Root	1.0m centres	10%
Elderberry	*Sambucus nigra*	Transplant; Seed raised	1 + 1	60 - 90cm	Bare Root	1.0m centres	5%
Goat Willow	*Salix cinerea*	Transplant	1 + 1	60 - 90cm	Bare Root	1.0m centres	10%

Table 4 - Infill Planting Schedule

Common Name	Botanical Name	Form	Age/ Condition	Overall Height	Root Condition	% Mix
Hazel	*Corylus avellana*	Transplant; Seed raised	1 + 1	180 - 200cm	Bare Root	10%
Hawthorn	*Crataegus monogyna*	Transplant; Seed raised	1 +2	180 - 200cm	Bare Root	50%
Holly	*Ilex aquifolium*	Container Grown	3 Lt Pot	60 - 90cm	Container	10%
Bird Cherry	*Prunus padus*	Transplant; Seed raised	1 + 2	180 - 200cm	Bare Root	5%
Blackthorn	*Prunus spinosa*	Transplant; Seed raised	1 + 2	120 - 150cm	Bare Root	10%
Dog Rose	*Rosa canina*	Transplant; Seed raised	1 + 0	120 - 150cm	Bare Root	5%
Guelder Rose	*Viburnum opulus*	Transplant; Seed raised	1 + 1	60 - 90cm	Bare Root	5%
Elderberry	*Sambucus nigra*	Transplant; Seed raised	1 + 1	80 - 100cm	Bare Root	5%

NOTES

1. Verifying Dimensions.
The contractor shall verify dimensions against such other drawings or site conditions as pertain to this part of the work.

2. Existing Services.
Any information concerning the location of existing services indicated on this drawing is intended for general guidance only. It shall be the responsibility of the contractor to determine and verify the exact horizontal and vertical alignment of all cables, pipes, etc. (both underground and overhead) before work commences.

3. Issue of Drawings.
Hard copies, dwf and pdf will form a controlled issue of the drawing. All other formats (dwg, dxf etc.) are deemed to be an uncontrolled issue and any work carried out based on these files is at the recipients own risk. RPS will not accept any responsibility for any errors arising from the use of these files, either by human error by the recipient, listing of un-dimensioned measurements, compatibility issues with the recipient's software, and any errors arising when these files are used to aid the recipients drawing production, or setting out on site.

Legend

- Site Boundary *(Outside edge of line denotes boundary)*
- Perimeter Deer Fence
- Perimeter Gate
- Internal Track
- Indicative Solar PV Array
- MV Transformer Areas
- Hardstand
- Temporary Construction Compound
- CCTV
- Indicative Cable Route
- Visibility Splay (Site Entrance)
- Indicative extent of existing vegetation (including trees) outside of site boundary
- Indicative extent of existing hedgerows (with trees) outside of site boundary
- Indicative location of existing hedgerows (with trees) within site boundary to be retained and protected in accordance with BS 5873:2012
- Existing trees / vegetation to be removed to facilitate access and development (146.6 Linear Metres Hedgerow & single tree Total)
- Proposed Feathered tree planting (52 Nr. Total) (Refer Table 1 on this sheet)
- Proposed hedgerow planting (643.7 Linear Metres Total) (Refer Table 2 on this sheet)
- Proposed Screen Planting (2, 512m² Total Area) (Refer to Table 3 on this sheet)
- Proposed Infill Planting (1,1612m² Total Area) (Refer to Table 4 on this sheet)
- Proposed Seeding (Panel Areas) (230,165m² Total Area) (Refer to Notes on this sheet)
- Proposed Wildflower Meadow Seeding (6, 731m² Total Area) (Refer to Notes on this sheet)
- Bt — Proposed Bat Box (5 Nr.)
- Bb — Proposed Bird Box (5 Nr.)
- Bh — Proposed Invertebrate Hotel (2 Nr.)
- I — Proposed Hibernacular (1 Nr.)

rev	amendments	check	date

TETRA TECH
RPS A TETRA TECH COMPANY
Elmwood House
74 Boucher Road
Belfast
BT12 6RZ
T +44 (0) 28 90 667914
F +44 (0) 28 90 668286
W www.rpsgroup.com/ireland
E ireland@rps.tetratech.com

Client: res

Project: Derrygrogan Little Solar Farm

Title: Landscape Mitigation Plan (Overall)

Project Number	Sheet Size	Drawing Scale
02898	A1	1:2000 @ A1

Drawing Number: Figure 1.8

Drawn By	Status	Revision
AAM	PLANNING	P02

Checked By	Approved By	Date
SA	RH	14/10/2025