Kilmarnock Battery Energy Storage

Volume 1

Chapter 4 Landscape and Visual

Kilmarnock Energy Centre Limited

September 2023

Delivering a better world

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
P01	29.09.2023	Submission	Yes	NW	Project Manager

Distribution List

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Table of Contents

Tables

Plates

Acronyms and Abbreviations

CEMP	Construction Environment Management Plan
CPA	County Planning Authority
DEFRA	Department for the Environment Food and Rural Affairs
ECLA	Ecology Landscape Appraisal
EIA	Environmental Impact Assessment
GIS	Geographical Information System Mapping
GLVIA3	Guidelines for Landscape and Visual Impact Assessment (Version 3)
LCA	Local Character Area
LNR	Local Nature Reserve
LVIA	Landscape and Visual Impact Assessment
NCA	National Character Area
NPPF	National Planning Policy Framework
OS	Ordinance Survey
OD	Above Ordinance Datum
PRoW	Public Right of Way

4. Landscape and Visual

4.1 Introduction

4.1.1 This chapter of the Environmental Impact Assessment Report (EIAR) presents the findings of an assessment of the likely significant effects on landscape and visual amenity, because of the construction and operation of the Proposed Scheme. The Proposed Scheme is described in Chapter 2 of this EIAR and is located approximately 250 meters (m) north of Kilmarnock South Substation (KSS) (hereafter referred to as the 'Site'). The Site location is shown in Volume 3, Figure 1-1, of this EIAR.

4.1.2 This chapter should be read in conjunction with the following EIAR chapters:

- Chapter 2, The Proposed Scheme;
- Chapter 5, Ecology and Biodiversity;
- Chapter 6, Cultural Heritage; and
- Chapter 8, Water Environment

4.1.3 This chapter is supported by the following technical appendices and figures:

- Volume 2, Appendix 4-A Scottish Natural Heritage: Baseline Landscape Character;
- Volume 2, Appendix 4-B Discounted Landscape Photographs;
- Volume 2, Appendix 4-C Landscape General Arrangement Plan;
- Volume 2, Appendix 4-D Photomontages with the Proposed Scheme;
- Volume 2, Appendix 4-E Landscape and Visual Glossary;
- Volume 2, Appendix 2-F Visual Assessment Sheets with Photomontages;
- Volume 2, Appendix 4-G Landscape Field Survey Sheets;
- Volume 3, Figure 4-1 Location Plan;
- Volume 3, Figure 4-2 Representative Viewpoint Location Plan;
- Volume 3, Figure 4-3 National Landscape Character Plan;
- Volume 3, Figure 4-4 Landscape Context;
- Volume 3, Figure 4-5 ZTV Screened; and
- Volume 3, Figure 4-6 Bare Earth.

4.1.4 The cumulative effects on landscape and visual with the Proposed Scheme and other committed developments in the vicinity have been considered within this chapter.

4.2 Legislative and Planning Policy Context

4.2.1 This assessment has considered relevant legislation and guidance set out in national, regional and local planning policy (summarised in the sections below). The legislation and policy requirements have informed the preparation of this EIAR chapter.

International, National and Local Legislation and Policy

4.2.2 Table 4-1 below outlines the relevant legislation and planning policy documents applicable to the study area.

Table 4-1: Relevant legislation and planning policy documents

Scale	Legislation/regulation	Summary of requirements/relevant policies
International	***European Landscape Convention (ELC)* (Ref 4-1)**	*Sets out an internationally agreed definition of landscape:* *"The landscape is part of the land, as perceived by local people or visitors, which evolves through time as a result of being acted upon by natural forces and human beings".* *It also sets out the key actions that countries should follow and provides an integrated, holistic approach and international context for landscape, under the headline banner that "All Landscapes Matter".*
National	***The Wildlife and Countryside Act 1981* (Ref 4-2)**	This act gives protection to native species, controls the release of non-native species, enhances the protection of Sites of Special Scientific Interest (SSSI) and builds upon the rights of way rules in the National Parks and Access to the Countryside Act 1949. This act states that: 'References to the conservation of the natural beauty of any land shall be construed as including references to the conservation of its flora, fauna and geographical and physiographical features'
Scottish Context **Other material considerations**	***National Planning Framework 4 (NPF4)* (Ref 4-3)**	*NPF4, published in February 2023, is Scotland's national spatial strategy, setting out planning principles, priorities and policy.*
	***Planning Advice Note 60: Natural Heritage* (Ref 4-4)**	*The guidance complements the National Planning Policy Guideline on Natural Heritage (NPPG 14), with examples of good planning practice in relation to natural heritage drawn from across Scotland highlighted in several case studies.*
	***Planning Advice Note 1/2013: Environmental Impact Assessment* (Ref 4-5)**	*Guidance on the integration of EIA procedures into the overall development management process. Aims to ensure that the likely environmental effects of a development proposal are properly understood before any development consent is granted. EIA therefore provides a means of assessing the likely significant environmental effects of a proposal, and the potential for avoiding, reducing or offsetting any adverse impacts, in a manner which is both systematic and transparent*
	***Planning Advice Note 51: planning, environmental protection and regulation* (Ref 4-6)**	*Supports the existing policy on the role of the planning system in relation to the environmental protection regime.*
	***Energy Storage Planning Advice* (Ref 4-7)**	*Advice for planning authorities on energy storage issues.*
Local	***East Ayrshire Adopted Local Development Plan (1) 2017* (Ref 4-8)**	***Policy ENV4: Gardens and Designed Landscapes*** *Development will not be supported where it will have significant adverse impacts upon (i) its character; (ii) important views to, from and within it and; (iii) important features that contribute to its value and that justify its designation, where applicable. Where a Proposed Development will impact on a Garden and Designed Landscape, the developer will be expected to provide a landscape management plan, to identify conservation needs and direct how change can best be accommodated.* ***Policy ENV8: Protecting and Enhancing the Landscape*** *The protection and enhancement of East Ayrshire's landscape character as identified in the Ayrshire Landscape Character Assessment will be a key consideration in assessing the appropriateness of development proposals in the rural area. The Council will require that:* *Development proposals are sited and designed to respect the nature and landscape character of the area and to minimise visual impact. Particular attention will be paid to size, scale, layout, materials, design, finish and colour.* *(ii) Where visual impacts are unavoidable, development proposals should include adequate mitigation measures to minimise such impacts on the landscape.* *(iii) Particular features that contribute to the value, quality and character of the landscape are conserved and enhanced. Development that would result in the loss of valuable landscape features, to such an extent that character and value of the landscape, are unacceptably diminished, will not be supported. Such landscape features include:* *a. Settings of settlements and buildings within the landscape;* *b. Skylines, distinctive landform features, landmark hills and prominent views;*

Scale	Legislation/regulation	Summary of requirements/relevant policies
		c. Woodlands, hedgerows and trees; *d. Field patterns and means of enclosure, including dry stone dykes; and* *e. Rights of way and footpaths* *Development that would create unacceptable visual intrusion or irreparable damage to landscape character will not be supported by the Council.* ***Policy ENV9: Trees, Woodland and Forestry*** *The Council will support the retention of individual trees, hedgerows and woodlands within both settlements and rural areas, where such trees contribute to the amenity, nature conservation and landscape value of the area. There will be a presumption against the felling of ancient semi-natural woodlands and trees protected by Preservation Orders.* *(i) are consistent with the Ayrshire and Arran Forestry and Woodland Strategy and contribute to Ayrshire's green network;* *(ii) take account of the landscape and ecological qualities of the area;* *(iii) demonstrate that recreational opportunities have been fully considered;* *Proposals that involve the removal of woodland will only be supported where it would achieve significant and clearly defined public benefits and is in line with the Scottish Government's Control of Woodland Policy.* *Where removal can be fully justified, compensatory planting will be required to the satisfaction of the Council and Forestry Commission Scotland and in line with the provisions of the Ayrshire and Arran Forestry & Woodland Strategy which forms Supplementary Guidance to this LDP.* *Non statutory guidance in the form of The Ayrshire and Arran Forestry and Woodland Strategy supports policy ENV 9 by providing detailed guidance on the most appropriate tree species and locations for woodland removal and creation.*
	East Ayrshire Draft Local Development Plan 2 2022 (Ref 4-9) (Currently at examination stage)	***Policy NE1: Protecting and Enhancing Landscape and features*** *The protection and enhancement of East Ayrshire's landscape character as identified in the Ayrshire Landscape Character Assessment will be a key consideration in assessing the appropriateness of all development proposals in the rural area. The Council will require that:* *Development proposals are sited and designed to respect the nature and landscape character of the area and to minimise visual impact. Particular attention will be paid to size, scale, layout, materials, design, finish and colour.* *Where visual impacts are unavoidable, development proposals should include adequate mitigation measures to minimise adverse impacts on the landscape.* *Features that contribute to the value, quality and character of the landscape are conserved and enhanced, where applicable or feasible to the development. Development that would result in the loss of valuable landscape features, to such an extent that character and value of the landscape are unacceptably diminished, will not be supported. Such landscape features include:* *a. Settings of settlements and buildings within the landscape;* *b. Skylines, distinctive landform features, landmark hills and prominent views;* *c. Woodlands, shelter belts, hedgerows and trees (especially ancient and veteran trees of high nature conservation and landscape value);* *d. Field patterns and means of enclosure, such as dry-stone dykes;* *e. Burns, rivers, lochs and other water features; and* *f. public rights of way and footpaths* *The Council will not support development that would create unacceptable visual intrusion or irreparable damage to landscape character.* *Mitigation* *All development which has the potential to have an adverse impact on landscape character and/or landscape features will be required to outline appropriate mitigation measures which will be undertaken these will be considered as part of any planning application. The Council will only support a proposal where it is satisfied there will not be an unacceptable adverse impact on the landscape after mitigation measures.*

Scale	Legislation/regulation	Summary of requirements/relevant policies
		Landscape and Visual Impact Assessment *Dependent on the likely magnitude of landscape impact, the Council may require proposals to be accompanied by a Landscape and Visual Impact Assessment (LVIA), which demonstrates clearly the level of impact the proposal will have on the landscape. The level of detail submitted should be commensurate with the scale of the application. The LVIA should also include a cumulative impact assessment, which must take account of all relevant development types, taking a broader approach than focusing on the site alone. The Council will not support proposals where there will be an unacceptable cumulative landscape and/or visual impact.* ***Policy NE8: Trees, Woodland, Forestry and Hedgerows*** *Within settlements and rural areas, there will be a presumption against the loss of:* • ancient semi-natural woodland; • native woodland; • ancient and veteran trees; • individual trees; • trees protected by Tree Preservation Orders; and • hedgerows. *Proposals which are likely to have an adverse impact on the ecological condition of these assets will not be supported by the Council.* *The removal of these natural assets will only be allowed where this will achieve significant and clearly defined economic, social and environmental benefits. Proposals that involve the removal of woodland will only be supported where it would achieve significant and clearly defined public benefits and is in line with the Scottish Government's Control of Woodland Policy.* *Where removal can be fully justified, compensatory planting and mitigation will be required to the satisfaction of the Council and Forestry and Land Scotland and in line with the provisions of The Ayrshire and Arran Forestry & Woodland Strategy. The Scottish Government's Control of Woodland Removal Policy will also be considered where relevant.* *The Ayrshire and Arran Forestry and Woodland Strategy forms non-statutory guidance which supports Policy NE8 by providing detailed guidance on the most appropriate tree species and locations for woodland removal and creation to ensure that a net gain is achieved.*
	South Ayrshire (Adopted) Local Development Plan 2 2022 (Ref 4-10)	**Environment & Climate Change LDP Policy: Landscape Quality** *We will maintain and improve the quality of South Ayrshire's landscape and its distinctive local characteristics. Proposals for development must conserve features that contribute to local distinctiveness, including:* *a. community settings, including the approaches to settlements, and buildings within the landscape;* *b. patterns of woodland, fields, hedgerow and tree features;* *c. special qualities of rivers, estuaries and coasts;* *d. historic landscapes; and* *e. skylines and hill features, including prominent views.* **Environment & Climate Change LDP Policy: Landscape Protection** *We will consider proposals within or next to Scenic Areas (as defined on the LDP environment map) against the following conditions.* *a. The significance of impacts and cumulative impacts on the environment, particularly landscape and visual effects as informed by the Ayrshire Landscape Character Assessment (SNH 1998)".* *b. How far they would benefit the economy.* *c. Whether they can be justified in a rural location.* **Environment & Climate Change LDP Policy: Woodland and Forestry** *We will support proposals for woodland and forestry that are:* *a. consistent with the objectives and main actions of the Ayrshire and Arran Woodland Strategy; and*

Scale	Legislation/regulation	Summary of requirements/relevant policies
		b. sympathetic to the environmental, nature and wildlife interests of the area, and, wherever appropriate, provide recreational opportunities for the public. **Environment & Climate Change LDP Policy: Preserving Trees** *When assessing proposals for development that might involve loss of, or work to, trees, we will consider how much it would affect the local area and will take measures to protect trees, especially those covered by a provisional or confirmed tree preservation order. Where appropriate we will consider the criteria in the Scottish Government Policy on the Control of Woodland Removal.* *Where the council is minded granting planning permission for a development that will necessitate the removal of existing trees, we will require the developer to replace them with new appropriate compensatory planting, considering the specific circumstances of the site.*

Other Guidance

4.2.3 This assessment has been undertaken using a methodology that has been developed by the Landscape Institute and IEMA and set out in version 3 of the Guidelines for Landscape and Visual Impact Assessment (GLVIA3) (Ref 4-11).

4.2.4 GLVIA3 states that:

"LVIA must address both effects on landscape as a resource in its own right and effects on views and visual amenity...An assessment of landscape effects should consider how the proposal will affect the elements that make up the landscape, its aesthetic and perceptual aspects, its distinctive character and the key characteristics that contribute to this....An assessment of visual effects deals with the effects of change and development on the views available to the people and their visual amenity."

4.2.5 Other guidance relating to landscape and visual assessment comprises two technical publications from the Landscape Institute:

- Technical Guidance Note 06/19: Visual Representation of Development Proposals (Ref 4-12).
- Technical Guidance Note 02/21: Assessing landscape value outside national designations (Ref 4-13).

4.2.6 The following documents were used to provide additional information to inform planting regime development:

- Agate, E. (1984). *Hedging: A Practical Handbook*. British Trust for Conservation Volunteers (Ref 4-14);
- British Standards Institution (1989). BS 3938:1989 *Recommendations for Tree Work* (Ref 4-15);
- British Standards Institution (1989). BS 4428:1989 *Code of Practice for General Landscape Operations* (Ref 4-16);
- British Standards Institution (1991). BS 5837:1991 *Trees in Relation to Construction* (Ref 4-17);
- British Standards Institution (1991). BS 7370 *Ground Maintenance parts 1, 2, 3, 4* (Ref 4-18); and
- Brooks, A. (1988). *Woodlands: A Practical Handbook*. British Trust for Conservation Volunteers (Ref 4-19),

4.3 Assessment Methodology

Stakeholder Consultation

4.3.1 A virtual consultation event went live on 10th May 2022 and remained online until the date of the in-person consultation event, held 23rd June 2022. For more information on the public consultation events, please read the Pre-Application Consultation Report.

4.3.2 Following feedback from this, further consultation was undertaken in April 2022 to refine the scope of the assessment with East Ayrshire Council and to agree the representative viewpoint locations and the landscape and visual receptors. The key responses are detailed in Table 4-2.

Table 4-2: Key consultations received specific to landscape and visual effects.

Consultee	Issue	How this is addressed
Virtual Public Consultation – (10th May 2022)		There was no feedback received.
Public consultation - (23rd June 2022) Hurlford Community Centre		There was no feedback received.

Consultee	Issue	How this is addressed
Kilmarnock Screening Opinion- 29th June 2022 **a.**	Allowing for the scale of the Development, its developmental form (i.e. terraced), and the nature and aspect of the site as open pastoral farmland, it is considered that the Development would fundamentally change the character of the Site from farmland to Development of industrial character (i.e. significant effect on the environment). It is considered that there would be adverse harmful change to the character of the surrounding farmland, which would be influenced by the Development.	This has been addressed within Cumulative Assessment section 4.11 and within The Assessment of Likely Significant Effects in section 4.7
b.	The applicant notes no trees are present with the Development site, and caution will need to be taken with any trees lining the site, such as not removing overhanging branches without liaison with an ecologist. The applicant notes a 30m buffer between the Development and the tree line will be in place, and no artificial lights will illuminate the tree line or other habitat features which could be used by bats. A full Bat Roost Suitability Assessment will be carried out.	This has been addressed the section 4.6 Design Mitigation and Enhancement Measures
c.	The proximity of these developments could have an impact on the Visual and Landscape, Ecology, Traffic, Noise and Air Quality, during construction, operational and decommissioning. All Developments will be required to comply with the conditions of their respective Environmental Permits. The existing KSS already has an impact on the landscape character, but it should be noted the cumulative effects of the three proposed Developments will undoubtedly have a larger impact on the landscape character. A Cumulative Effects Assessment will be undertaken as part of the application.	This has been addressed within Cumulative Assessment in section 4.11
d.	The Development is not expected to result in a significant change in character landscape due to its proximity to the current KSS which the Planning Authority notes 'undoubtedly influences the local landscape character' although the Planning Authority do note the cumulative effect of increased industrial development on the site will result in a fundamental change of character of the land.	This has been addressed within Cumulative Assessment section 4.11
e.	There are several listed buildings in the wider area to the Development, with the C listed Haining Mains approximately 750 metres to the north-east of the Site. To the south-west of the Site are Dollars Mains, Dollars House, and Stable Cottage, all of which are B listed that are between 1km and 1.2km from the Site. Further to the south-east of these listed buildings are Aird Farm (Grade B) and the C listed Shaws Mill Bridge.	This is accessed within Chapter 6 Cultural Heritage
f.	Cumulative impacts are highly likely to have a significant impact upon the environment given the scale and nature of the Proposed Scheme and proximity of other similar developments, either submitted or forthcoming. The loss of agricultural land for the duration of the development and any reinstatement of the land allowing for the terracing / shelf form will take several years to allow the land to go back into productive pasture / crop production use. Therefore, the effects on the environment and loss of agricultural land should be considered.	This has been addressed within Cumulative Assessment Section 4.11
Local Planning Authority- East Ayrshire Council	Requested ZTV on the 17-03 23	A ZTV with representative viewpoints was shared with EAC on 25/03/23
	This study area was confirmed by a site visit on May 2022, by two further site visits in 2023 (June and August) and a site visit in October 2023 to capture a view from Low Dallars Farm. The 2023 site visits were to confirm visualisation viewpoints contents and to take additional viewpoints as recommended by East Ayrshire Council.	Suggested additional viewpoints at Dallars Main/Dallars House (Category B Listed building)

Zone of Theoretical Visibility

4.3.3 A zone of Theoretical Visibility (ZTV) was modeled digitally to identify those areas of the landscape that theoretically will be visually connected to the Proposed Scheme. The ZTV is used as an aid in the identification of those receptors that are likely to be most affected by the Proposed Scheme and those that do not require detailed consideration.

4.3.4 Volume 3, Figure 4.6 ZTV Bare Earth Scenario and Figure 4.5 ZTV Screened, of this EIAR illustrates the ZTV.

4.3.5 The ZTV is based on a 5 m digital terrain model (DTM) from OS Master Map to create a bare earth scenario. The DTM does not consider the surface detail of buildings and vegetation and therefore to incorporate the screening effects of vegetation and buildings, woodland from the National Forestry Inventory (NFI) using an assumed height of 10m and existing buildings with an assumed height of 7.5 m have been incorporated to create a screened ZTV. The screened ZTV is based on a maximum building height of the hv transformer compound 9.5m, 3.5m for the battery units and a 4m perimeter fence. Further details of the construction elements can be found in Table 4-3 below. The screened ZTV takes account of the effect that topography, settlements and significant woodland blocks / belts will have on views towards the Proposed Scheme and therefore provides a relatively realistic illustration of areas within which the Proposed Scheme could theoretically be visible. However, the ZTV needs to be qualified by the following considerations:

- The ZTV is limited by the detail of the digital terrain model data used and does not take account of local topographic variations.
- Some areas of theoretical visibility may comprise woodland (not accounted for in the NFI) or agricultural land, where there is effectively no public access and the likelihood of views being experienced is consequently low.
- The ZTV does not take account of the likely orientation of a viewer, such as the direction of travel and there is no allowance for reduction of visibility with distance, weather or light.

Construction Elements Summary

Table 4-3: Construction elements

Construction Element	Scale	Details
BESS Units	16.5 x 23.8m h*eight at 3.5m*	*To include battery blocks, inverters, heating, ventilations and MV transformers.*
HV Transformer Compound	68.7m (max) x 41.2m (max) Highest component 9.5m	*Enclosed area designated for HV transformer*
HV Transformer (up to 2 units)	Indicative Design shown	*Grid connection*
MV switchroom (up to 2)	12.3m x 5m x 3.4m	*Grid connection*
Acoustic Fencing and security lighting	Fencing up to 4m, lighting columns	*Security of the site and noise mitigation*
Spares containers (up to 4)	12.3m x 2.7m x 3.4m	*For spare consumables*
Control room (up to 1)	12.3m x 5m x 3.4m	*Grid connection and operations*
LV switchroom and Aux. Transformer (up to 4)	8.8m x 3.5m x 3.5m	*Grid connection*

4.3.6 These limitations mean that the ZTV tends to overestimate the extent of visibility, both in terms of the areas from which the Proposed Scheme is visible and the extent of the site which is visible. Consequently, the ZTV should be considered as a tool to identify areas of potential visibility for further targeted survey and assessment, and not a measure of the visual effect.

4.3.7 The ZTV for the Proposed Scheme shows that as the land is on a localised elevated section, there is potential for the development to be seen within the wider landscape. There are bands of mature vegetation strips in copses and to the field edge that will aid screening within the wider area.

4.3.8 The assumptions made during desk studies were verified and extended upon through a Site survey, carried out in July 2021 allowing for further identification of features or elements that contribute to the character of the area and to confirm the potential visibility of the Scheme.

4.3.9 The 3 km extent of the study area has been determined by considering the preliminary study area, the results of the ZTV localized, consultation responses and the initial findings of the baseline appraisal and assessment process.

4.3.10 Landscape or visual receptors outside the areas of visibility shown on the ZTV study would not be affected by the Proposed Scheme and are not accessed for effects in the LVA.

Study Area

4.3.11 The study area has been assessed and defined through desk top study, ZTV modeling and verification in the field. It is considered, based upon the nature of the Proposed Scheme, that it would not result in significant effects beyond a distance of 3 km. Field study sheets were undertaken on the site visit undertaken on June 20th 2022 (summer views) and in May and August 2023 and these accessed the two main types of landscape found around the Proposed Scheme study area. These can be found in Volume 2, Appendix 4-G Landscape Field Survey Sheets, of this EIAR.

Site Visit

4.3.12 A site survey was undertaken by a Chartered Landscape Architect, who visited the study area in June 2022 and again in May and August 2024, when vegetation was in leaf. This process identified and refined the characteristics of local character areas, and the number and type of visual receptors with views towards the Proposed Scheme and the nature of those views. Please see Volume 3, Figure 4-2 for Representative Viewpoint Location Plan and Volume 2, Appendix 4-D Photomontages with the Proposed Scheme and Appendix 4-F Visual Assessment Sheets with Photomontages, of this EIAR, for details.

Data Sources

4.3.13 The following resources were utilised to establish the baseline landscape and visual amenity conditions:

- East Ayrshire Local Development Plan (Adopted) (Ref 4-8);
- East Ayrshire Local Development Plan 2 (Draft) (Ref 4-9);
- South Ayrshire Local Development Plan 2 (Adopted) (Ref 4-10);
- East Ayrshire Green Infrastructure Guidance (Ref 4-20);
- East Ayrshire Dark Sky Lighting Guidance (Ref 4-21);
- Scottish Natural Heritage, Scottish Landscape Character Types Map and Descriptions (Ref 4-22);
- The Proposed Development's topographical survey; and
- Google Earth.

4.3.14 Where distances are given in the assessment, these are approximate distances between the development and the nearest part of the receptor in question, unless otherwise specified.

Visual Aids

4.3.15 Photographs of the existing views and photomontages showing the Proposed Scheme are shown within Volume 2 Appendix 4-D Photomontages with the Proposed Scheme, of this EIAR. The method of visualisation selected has been informed by Technical Note 06/19 (Ref 4-12).

Landscape Planting

4.3.16 In designing the landscape planting plan, the following considerations were followed:

- Establishment of a landscape framework. It is considered a significant number of trees and shrubs will be required to address the local council's (EAC's) concerns, as outlined in the ECU EIA Screening Opinion for the Scheme (see Volume 2, Appendix 1-B Screening Opinion, of this EIAR) and see Table 4-2: Key consultations received specific to landscape and visual effects;
- Trees should be grouped with significant shrub planting to screen the Proposed Scheme
- Protect existing trees and shrubs through changes in levels and the introduction of services; and
- The following guidance was referred to:

- Agate, E. (1984). *Hedging: A Practical Handbook*. British Trust for Conservation Volunteers (Ref 4-14);
- British Standards Institution (1989). BS 3938:1989 *Recommendations for Tree Work* (Ref 4-15);
- British Standards Institution (1989). BS 4428:1989 *Code of Practice for General Landscape Operations* (Ref 4-16);
- British Standards Institution (1991). BS 5837:1991 *Trees in Relation to Construction* (Ref 4-17);
- British Standards Institution (1991). BS 7370 *Ground Maintenance parts 1, 2, 3, 4* (Ref 4-18); and
- Brooks, A. (1988). *Woodlands: A Practical Handbook*. British Trust for Conservation Volunteers (Ref 4-19).

4.4 Landscape and Visual Methodology

Introduction

4.4.1 The landscape and visual impact assessment has been carried out in accordance with the following good practice guidance documents from the Landscape Institute:

- Guidelines for Landscape and Visual Impact Assessment (version 3, GLVIA3) (Ref 4-11).
- Technical Guidance Note 06/19: Visual Representation of Development Proposals (Ref 4-12).
- Technical Guidance Note 02/21: Assessing landscape value outside national designations (Ref 4-13).

4.4.2 GLVIA3 places a strong emphasis on the importance of professional judgement in identifying and defining the significance of landscape and visual effects. The LVA has been undertaken by Chartered Landscape Architects who are experienced in undertaking and reporting assessments of similar types of projects. Professional judgement has been used in combination with structured methods and criteria to determine the sensitivity of landscape and visual receptors (informed by their value and susceptibility to change), the magnitude of effects on those receptors (i.e., the nature of the effect), and the significance of effects.

4.4.3 The following section summarises the methodology for the LVA. For clarity, and in accordance with good practice, the assessment of potential effects on landscape character and visual amenity, although closely related, are undertaken separately.

Sensitivity

Landscape Receptors

4.4.4 Landscape receptors are described as components of the landscape that are likely to be affected by the Proposed Development. These can include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual aspects. It is the interaction between the different components of the Proposed Scheme and these landscape receptors which has potential to result in landscape impacts and effects (both adverse and beneficial).

4.4.5 The sensitivity of the landscape receptor has been derived by combining the value of the landscape (undertaken as part of the baseline study) and the susceptibility to change of the receptor to the specific type of development being assessed.

4.4.6 Landscape value is frequently addressed by reference to international, national, regional, and local designations. The absence of such a designation does not necessarily imply a lack of quality or value. For example, factors such as accessibility and local scarcity can render areas of nationally unremarkable landscape quality, highly valuable as a local resource.

4.4.7 The evaluation of landscape value has been informed by LI Technical Guidance Note 02/21 and undertaken considering the following factors and classified as high, medium, or low with evidence provided as to the basis of the evaluation:

- Natural heritage – Landscape with clear evidence of ecological, geological, geomorphological or physiographic interest which contribute positively to the landscape.
- Cultural heritage – Landscape with clear evidence of archaeological, historical or cultural interest which contribute positively to the landscape.
- Landscape condition – Landscape which is in a good physical state both regarding individual elements and overall landscape structure.
- Associations – Landscape which relates to notable people, events and the arts.
- Distinctiveness – Landscape that has a strong sense of identity.
- Recreational – Landscape offering recreational opportunities where experience of landscape is important.
- Perceptual (scenic) – Landscape that appeals to the senses, primarily the visual sense.
- Perceptual (wildness and tranquillity) – Landscape with a strong perceptual value, notably wildness, tranquillity and/or dark skies.
- Functional - Landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape.

4.4.8 Landscape susceptibility relates to the ability of a particular landscape to accommodate the Proposed Development. It is appraised through consideration of the baseline characteristics of the landscape, and in particular, the scale or complexity of a given landscape. The evaluation of landscape susceptibility is defined as high, medium or low and is supported by a clear explanation, based upon the analysis of the landscape receptor and the extent to which it can accommodate the type of change proposed, specific to the Proposed Development.

4.4.9 The overall sensitivity assessment of the landscape receptor is made by employing professional judgement to combine and analyse the identified value and susceptibility with overall levels given from high, medium to low. Table 4-4 below outlines indicators that inform landscape value, susceptibility and sensitivity. The basis of the assessment will be made clear in the evaluation of each landscape receptor.

Table 4-4: Sensitivity of Landscape Receptors

	Higher Sensitivity		Lower Sensitivity
Value	A designated landscape (National Park, Area of Outstanding Natural Beauty, National Scenic Area, World Heritage Site) or a landscape in very good condition, exceptional scenic quality and high recreational opportunities, or a high degree of rarity.		Landscapes containing few if any notable elements / features, of poor condition or containing several detracting features and limited aesthetic qualities. Landscapes which are not formally designated.
Susceptibility	Attributes that make up the character of the landscape which offer very limited opportunities to accommodate change of the type proposed without fundamentally altering key characteristics.		Attributes that make up the character of the landscape which are tolerant of a large degree of the type of change proposed without fundamentally altering the key characteristics.

Visual Receptors

4.4.10 Sensitivity of visual receptors has been defined through an appraisal of the viewing expectation, or value placed on the view, as identified in the baseline study, and its susceptibility to change.

4.4.11 The value of the view is an appraisal of the value attached to views and is often informed by the appearance on Ordnance Survey or tourist maps and in guidebooks, literature and art, or identified in policy. Value can also be indicated by the provision of parking or services and signage and

interpretation. The nature and composition of the view and its scenic quality is also an indicator. The value of the view has been classified as high, medium, or low and is supported by evidenced, professional judgements.

4.4.12 The susceptibility of visual receptors to change has been established as a function of the occupation or activity of people experiencing the view, and the extent to which their attention or interest is focused on the view and the visual amenity they experience. For example, residents in their home, walkers whose interest may tend to be focused on the landscape or a particular view, or visitors to an attraction where views are an important part of the experience, indicate a higher level of susceptibility. Conversely, receptors engaged in outdoor sport where views are not important or receptors at their place of work are considered less susceptible to change.

4.4.13 As with landscape susceptibility, judgements about the susceptibility of visual receptors have been described as high, medium or low using consistent and reasoned judgements.

4.4.14 The overall sensitivity assessment of the visual receptor has been determined by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall visual sensitivity has been rated as high, medium or low. Table 4-5 below outlines indicators that inform value of the view, susceptibility and sensitivity of visual receptors. The basis of the assessment is made clear in the evaluation of each visual receptor.

Table 4-5: Sensitivity of Visual Receptors

	Higher Sensitivity		Lower Sensitivity
Value	Views protected by designation, or nationally recognised, or recorded on maps / guidebooks or with cultural associations. Views that have high scenic qualities relating to the content and composition of the view.		Views which are not documented or protected with minimal or no cultural associations. Views that exhibit low scenic qualities relating to the content and composition of the view.
Susceptibility	Viewers whose attention or interest is focused on their surroundings.		People whose attention or interest is not focused on their surroundings and where the view is incidental to their enjoyment.

Magnitude of Effect

Landscape

4.4.15 Landscape magnitude of effect refers to the extent to which the Proposed Scheme would alter the existing characteristics of the landscape. It is an expression of the size or scale of change to the landscape, the geographical extent of the area influenced, and its duration and reversibility. The variables involved are:

- the extent of existing landscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
- the extent to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by the addition of new components;
- whether the change alters the key characteristics of the landscape that are integral to its distinctive character;
- the geographic area over which the change will be experienced (for example within the application boundary, the immediate setting around that boundary, at the local landscape character area scale, or on a larger scale influencing broader areas of landscape character); and
- the duration of the change (i.e., short term (0-5 years), medium term (5-10 years), or long term (10 years +)), and its reversibility (i.e., whether it is permanent, temporary, or partially reversible).

4.4.16 Landscape change can be both direct, through alteration of physical components, or indirect, resulting from changes to perceptual aspects of character and how it is experienced.

4.4.17 An overall assessment of the magnitude of landscape change resulting from the Proposed Scheme on landscape receptors has been made by combining the above judgements using evidence and professional judgement. The levels of landscape magnitude of change are described as being very high, high, medium, low, very low and none as defined in Table 4-6 below.

Table 4-6: Magnitude of Effect - Landscape Receptors

Magnitude	Criteria
Very High	Substantial alteration to the landscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term, permanent or reversible.
High	Large alteration to the landscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term, permanent or reversible.
Medium	Partial alteration to the landscape receptor or may impact a wide area or characteristics at a local level. May be medium term, permanent or reversible.
Low	Slight alteration to the landscape receptor or may impact a restricted area and few key characteristics. May be short to medium term, permanent or reversible.
Very Low	Very slight alteration to the landscape receptor or may impact a limited area or no key characteristics. May be short term, permanent or reversible.
None	No change to the landscape receptor.

Visual

4.4.18 Visual magnitude of effect relates to the extent to which the Proposed Scheme would alter the existing view and is an expression of the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. The variables involved are described below:

- the scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the Proposed Development;
- the degree of contrast or integration of any new features or changes in the form, scale, composition and focal points of the view;
- the nature of the view of the Proposed Scheme in relation to the amount of time over which it will be experienced, and whether views of this will be visible fully, partially or glimpsed;
- the angle of view in relation to the main activity of the receptor, distance of the viewpoint from the Proposed Scheme and the extent of the area over which the changes would be visible; and
- the duration of the change (i.e., short term (0-5 years), medium term (5-10 years), or long term (10 years +), and its reversibility (i.e., whether it is permanent, temporary, or partially reversible).

4.4.19 An overall assessment of the magnitude of visual change resulting from the Proposed Scheme on the visual receptor has been made combining the above judgements using evidence and professional judgement. The levels of visual magnitude of change are described as being very high, high, medium, low, very low and none as defined in Table 4-7 below.

Table 4-7: Magnitude of Effect – Visual Receptors

Magnitude	Criteria
Very High	A substantial change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
High	A pronounced change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
Medium	A noticeable change to the composition of the view or change that may be viewed in the middle ground or indirectly. May be medium term, permanent or reversible.
Low	An unobtrusive change in the composition of the view or change that may be viewed in the background or obliquely. May be short to medium term, permanent or reversible.
Very Low	A barely perceptible change in the composition of the view or change that may be viewed in the background and/or very obliquely. May be short term, permanent or reversible.
None	No change to the view.

Significance of Effects

4.4.20 Determination of the significance of landscape and visual effects has been undertaken by employing professional judgement and experience to combine and analyse the magnitude of change against the identified sensitivity of landscape and visual receptors.

4.4.21 The landscape assessment has taken account of direct and indirect changes to existing landscape elements, features, key characteristics and evaluates the extent to which these would be lost or modified, in the context of their importance in determining the existing baseline landscape character.

4.4.22 The visual assessment has taken account of the likely changes to the visual composition, including the extent to which new features would distract or screen existing elements in the view or disrupt the scale, structure, or focus of the existing view.

4.4.23 The significance of landscape and visual effects are described with reference to the criteria presented in Table 4-8 below.

Table 4-8: Significance of Effect (Landscape and Visual Effects)

Significance of Effect	Landscape	Visual
Major Beneficial	Alterations that result in a considerable improvement of the existing landscape resource. Valued characteristic features would be restored or reintroduced.	Alterations that typically result in a pronounced improvement in the existing view.
Moderate Beneficial	Alterations that result in a partial improvement of the existing landscape resource. Valued characteristic features would be largely restored or reintroduced.	Alterations that typically result in a noticeable improvement in the existing view.
Minor Beneficial	Alterations that result in a slight improvement of the existing landscape resource. Characteristic features would be partially restored.	Alterations that typically result in a limited improvement in the existing view.
Negligible Beneficial	Alterations that result in a very slight improvement to the existing landscape resource, not uncharacteristic within the receiving landscape.	Alterations that typically result in a barely perceptible improvement in the existing view.
Neutral	No alteration to any of the components that contribute to the existing landscape resource.	No change to the existing view.
Negligible Adverse	Alterations that result in a very slight deterioration to the existing landscape resource, not uncharacteristic within the receiving landscape.	Alterations that typically result in a barely perceptible deterioration in the existing view.
Minor Adverse	Alterations that result in a slight deterioration of the existing landscape resource. Characteristic features would be partially lost.	Alterations that typically result in a limited deterioration in the existing view.
Moderate Adverse	Alterations that result in a partial deterioration of the existing landscape resource. Valued characteristic features would be largely lost.	Alterations that typically result in a noticeable deterioration in the existing view.
Major Adverse	Alterations that result in a considerable deterioration of the existing landscape resource. Valued characteristic features would be wholly lost.	Alterations that typically result in a pronounced deterioration in the existing view.

Temporal Scope of Appraisal

4.4.24 Landscape and visual effects can differ from one stage of development to the next and change over time as mitigation planting establishes and matures. The assessment therefore considers potential effects of the Proposed Scheme at each of the following three stages:

- Construction: including consideration of all temporary structures and works areas relating to construction, such as temporary construction compounds, movement of plant and machinery etc.
- Operational Year 1: including consideration of potential medium to longer term effects associated with the Development following completion of the construction phase and associated reinstatement. This stage is intended to represent the potential worst-case operational effects prior to establishment of mitigation planting.
- Operation Year 15: including consideration of potential longer-term effects of the Development 15 years after becoming operational. This stage is intended to help demonstrate how proposed mitigation planting will influence effects once established.

4.5 Baseline

Designations with Relevance to the LVA

4.5.1 There are no landscape designations within the Site. Within the wider 3km study area to the southeast there are Gardens and Designated Landscapes

4.5.2 A PRoW runs along the access road of the Proposed Scheme is identified by East Ayrshire Council between Commonhead and Haining Mains, crossing the Cessnock Water via stepping stones at Braehead. It is located 0.5km from the Proposed Scheme at its nearest point.

4.5.3 Bordering the north of the access road is a Local Nature Conservation area. In and around Dallars House there are bands of Ancient Woodland.

National Landscape Character Areas

4.5.4 Within the National Landscape Character Assessment, the Proposed Scheme is located within Landscape Character Type (LCT) 66: Agricultural Lowlands - Ayrshire. While this LCT covers a large proportion of the Ayrshire basin, LCT 68: Lowland River Valleys – Ayrshire also cuts through to the east of the site. See Volume 2, Appendix 4-A and Volume 3 Figure 4-3 for the National Landscape Character Plan.

4.5.5 Key characteristics of the Agricultural Lowlands – Ayrshire LCT66 are:

- Complex landform, gently increasing in height from the coastal fringe, dissected by many burns and streams draining to incised main river valleys to create an undulating lowland landscape.
- Generally small to medium scale landscape.
- Landcover is predominantly pastoral, with some arable on lower and better soils.
- Fields often regular in shape and enclosed by beech or hawthorn hedges, with mature hedgerow trees giving the landscape a surprisingly wooded character.
- Settlement pattern historic in origin based upon larger, more self-contained farmsteads set in a hinterland of fields.
- Number of larger towns and villages with historic cores surrounded by more modern development.
- Dense network of often very rural minor roads.
- Varying landscape character which ranges from very rural to more fragmented and developed landscapes on urban fringes.
- Views tend to be dictated by the local topography and landcover.

4.5.6 Key characteristics of the Lowland River Valleys LCT68 are:

- Pastoral farming character with hedgerow field boundaries and valley slopes which are frequently wooded with stands of beech and semi-natural woodland.
- Rich woodland of the river valleys often incorporated into designed landscapes.
- Intimate small-scale landscapes which often lie hidden within the wider agricultural lowlands.
- Views tend to be enclosed, short distance and focused along the diverse river valley landscape. There are open elevated views over the valleys from settlements and roads sited on upper slopes.

4.5.7 National Landscape Character Areas are illustrated in Volume 3, Figure 4-3, of this EIAR.

Local Landscape Context

4.5.8 This is a medium scale, predominantly pastoral landscape structured by well-established hedgerows and mature trees. The LCT 66 Assessment notes that:

"The landform is surprisingly complex, dissected by many burns and streams draining to incised main river valleys to create an undulating lowland landscape".

4.5.9 The immediate proximity of the site is heavily influenced by the KSS and surrounding infrastructure, such as pylons and overhead power lines. A planning application was approved in 2015 for the extension of the 1970s substation complex (EAC Application 15/0827/PP). The East Ayrshire planning officer report states that

''the Proposed Scheme is set within an existing substation facility and is set into the terrain with existing trees and vegetation to assist in providing natural screening…It is considered the proposal will not have a detrimental visual impact on the amenity of adjoining and nearby properties."

4.5.10 Away from the immediate site, the city of Kilmarnock dominates the setting to the northwest, while to the south a landscape of undulating hills is incised by numerous small watercourses. The Cessnock Water river valley runs to the east of the site, transitioning from a steeply wooded cutting to wide open river plain as it nears the site and flows towards Kilmarnock to join the Irvine River.

4.5.11 Local landscape context is illustrated in Volume 3, Figure 4-4, of this EIAR.

Vegetation pattern

4.5.12 Field boundaries generally consist of native hedgerows; some are well-formed, and some appear to be existing remnants. The dense areas of hedgerows provide generally good screening for the site from different viewpoints. Boundaries in the area also consist of traditional post and wire fencing between pastoral grazed fields.

4.5.13 The wider landscape vegetation typically comprises of deciduous native trees present in copses and hedgerows. Pockets of ancient woodland are present within the wider study area. Coniferous edges have been added for screening purposes, but it is not in keeping with the wider natural landscape character of the area.

4.5.14 Small pockets of native woodland are scattered across the area with woodland cover evident at the KSS adjacent to the site. A mixture of coniferous and deciduous trees screens the KSS from the surrounding area.

4.5.15 This landscape is comprised of an irregular pattern of large-scale fields. Cattle farms are scattered throughout the area. This is a landscape of mostly pastoral grazed fields with little arable landscape.

4.5.16 Mature vegetation associated with the road and stream corridors provides important visual screening and helps to lessen the impacts and visually enclose sections of the Proposed Scheme.

4.5.17 For further information on vegetation patterns, refer to Chapter 5 Ecology and Biodiversity, of this EIAR.

Landform

4.5.18 The landscape currently functions as arable farmland to Braeheadview Farm.

4.5.19 The landform comprises a rolling rural lowland landscape with open views from the majority of the Study Area. The highest point to the north of the Site falls towards the watercourse and the rolling landscape provides good natural screening, as the Site lies lower within the valley.

4.5.20 The Site lies within the Landscape Character Areas of the Agricultural Lowlands (LCT66) and the Lowland River Valleys of Ayrshire (LCT68). This explains the pattern of pastoral farming in the area with hedgerow field boundaries valley slopes that are natively wooded as well as the complex skylines formed by interlocking hills within the southern valleys.

Topography

4.5.21 The topography of the Site is generally low lying with moderately steep slopes. Topographic levels on site range by 10 m from approximately 55 m Above Ordnance Datum (AOD) to 45 m AOD. The Site slopes at a consistent gradient from northwest to southeast towards the Cessnock Water watercourse. In elevated areas of the Site the gradient is considered sufficient that groundwater flood risk is low. The Site is not located near to any further sources of flood risk such as canals or reservoirs.

4.5.22 For context, land further south and southwest outside of the 3 km survey area slopes up, with a high point of 151 m AOD around 3 km to the Southwest above Craigiehill Quarry. North from the Site land slopes down towards Kilmarnock around 3 km to around 25 m AOD at the River Irvine. East from the Site land stays relatively flat within the river Irvine valley.

Plate 4-1: Photograph taken on Site illustrating land slope gently down to the unnamed stream at the valley bottom and gently undulating landscape in the surrounding area.

Geology

4.5.23 The landform within the Landscape Character Type (LCT) 66: Agricultural Lowlands - Ayrshire:

‘The majority of Ayrshire lies within the Midland Valley of Scotland, the broad belt of comparatively low land (rift valley) which is bounded by the Highland Boundary Fault to the north and the Southern Upland Fault to the south.’

4.5.24 The agricultural lowlands consist of ‘Inland lowland soils in Ayrshire are predominantly mineral gleys.’

Settlement

4.5.25 Land use within the study area is mainly agricultural. Exceptions are the existing KSS less than 200m south from the Proposed Scheme, and Braehead Farm which directly borders and is partially surrounded by the northeast of the Site. The closet urban development is the southern edge of Kilmarnock, approximately 1.6km to the north of the Site.

4.5.26 There are scattered farmsteads in the open area between the settlements.

4.5.27 Single track roads and winding lanes are characteristic of the area, which lead to scattered private developments, such as Low Dallars and Low Dallars House.

Infrastructure

4.5.28 There is access to minor road networks such as the A76, A719, and B7073 in the study area. The Kilmarnock Bypass is a relatively busy road; however, the vehicular activity is not noticeable near the Site due to landform and vegetation screening.

4.5.29 A very prominent feature within the landscape is the high number of overhead lines and pylons which converge at the existing substation. They are apparent throughout the area and are often present against the skyline, creating a detracting aspect within the local landscape.

4.5.30 Whitelee Windfarm is a large feature that frames the background of the surrounding site study area.

Hydrology

4.5.31 A number of watercourses are located in the study area. The Cessnock Water runs to the east of the Proposed Scheme, flowing through agricultural land before joining the river Irvine.

4.5.32 Muggersland Burn runs southeast to the Proposed Scheme, before joining the Cessnock Water at the north-eastern tip of the site.

4.5.33 To the north of the Proposed Site is an unnamed tributary of the Cessnock Water. These flows north-east and join other unnamed watercourses.

4.5.34 For further information on the water environment, please read Chapter 8 Water Environment, of this EIAR.

Rarity and Representativeness

4.5.35 The Scheme study area is broadly similar in landscape terms to the immediate surrounding landscape on the urban fringe of Kilmarnock.

4.5.36 Land to the east and south transitions from a commercial/residential district into farmland (arable and pastoral) on the outskirts of Kilmarnock. To the north the land contains scattered settlements, pasture and arable farmland. Green infrastructure is generally limited to field and stream edges, screening vegetation and some woodland copses.

4.5.37 The area generally mirrors the surrounding landscape character of woodland, which provides enclosure to the open areas of field. Although there are some differences in character, the overall character is broadly like the surrounding landscape character and type and is not considered to be rare.

Perceptual Aspects

4.5.38 The study area contributes to the agricultural character of Ayrshire by providing a transitional breakdown from urban development to the rural character to the east. The study area is a mixture of the urban fringe character and the assorted wooded/agricultural character of the countryside beyond.

4.5.39 The tranquility and wildness of the study area is limited by the presence of development and the distant noise of the minor road networks such as the A76, A719, and B7073 and the Kilmarnock bypass is a relatively busy road. The rural area provides an important setting for the urban fringe to the west.

Visual Baseline

4.5.40 The visual baseline section explains the nature of visual receptors within the study area which have the potential to experience views towards the Site. The receptors identified have been selected on the basis that they fall within the ZTV (Volume 3, Figure 4.6 ZTV Bare Earth Scenario and Figure 4.5 ZTV Screened). As illustrated in the ZTV, the pattern of theoretical visibility extends across the landscape, limited by localised landform, pockets of vegetation and the settlement edge of Kilmarnock.

4.5.41 The location of the visual receptors is shown in Volume 3, Figure 4-2. This shows viewpoints representing visual receptors whose views are considered likely to be affected by the Proposed Scheme.

4.5.42 A series of 8 representative viewpoints, reflecting specific views and receptors have been identified in consultation with East Ayrshire's Senior Planner from the Development Management (Energy Team). These have been reviewed and assessed on site as part of this LVIA, and are shown in Volume 2, Appendix 4-F Visual Assessment Sheets with Photomontages, and are listed below:

Viewpoint 1: View from the edge of the Braeheadview farmyard looking directly onto the site to the south.

4.5.43 **The landscape character and scale** - medium to large scale farm fields enclose the farm buildings and outhouses. There are widespread views to the surrounding landscape due to topography and nature of the vegetation belts. Some localised copses in view. Dense network of rural minor roads.

4.5.44 **In the foreground** is arable land to the edge of the farm building and outhouses. Post and wire fence and a grassed bund demarcates the boundary to the west. Vegetation is generally limited to the field edge and consists of hedgerow with limited hedgerow trees. Fields are regular in shape. Topography slightly rises to the west and views out are limited by the topographical horizon.

4.5.45 **To the midground** SP Energy Kilmarnock South Substation is located to the mid ground and forms a hub for several key overhead lines. The substation is in a localised dip. Screening has been well considered and consists of bunding with mature evergreen and deciduous planting. A large proportion of the planting consists of mature evergreen trees, which provide a year-round screen to some of the substation components. Lines of pylons radiate to the substation centre.

4.5.46 **To the background** are views stretch out across the wide valley with land gently rising from the coastal fringe. The land rises to the south with some denser planted areas to the higher ground. The pylons are a consistent feature on the skyline. The land pattern continues to consist of medium to large scale arable fields with vegetation limited to the field edge and for the most part bordered by hedgerow.

4.5.47 **Distance from Proposed Development** – on the edge of the proposed development.

Viewpoint 2: View at the junction of Treeswoodhead Road and the access road to Braeheadview Farm and Balgray Cottage. Looking in a south westerly direction.

4.5.48 **The landscape scale and character** - Undulating lowland landscape with regular medium scale arable fields to both sides of Treeswoodhead road. There is some localized vegetative screening around the residential properties, particularly to the south. Vegetative belts screen Kilmarnock Substation and the area around Muggersland Burn. Beyond the farmland rises up limiting views. A fabrication and welding business (Duncan McInnes) with residential property and outbuildings is located to the roadside edge. Dense network of rural minor roads in the surrounding farmland.

4.5.49 **In the foreground** - Arable fields to the foreground with limited boundary vegetation. Post and wire fence form the boundary to Treeswoodhead road. A combination of scrub and intermittent native hedgerow forms the boundary to the remainder of the field. A Public Right of Way is identified by East Ayrshire council between Commonhead and Haining Mains, crossing the Cessnock Water via stepping stones at Braehead. Located 0.5km from the Proposed Scheme at its nearest point, it is not shown on Ordnance Survey maps and is likely an agricultural route rather than recreational.

4.5.50 **To the midground** - Mature dense vegetation forms part of the boundary to the residential properties on the access road to Braheadview Farm. The land slightly rises south, showing a landscape of arable fields with intermittent hedgerows and limited hedgerow trees.

4.5.51 **In the background** - Views are limited to the south by the topographical horizon. Pylon lines are prominent in the skyline. The horizon in the far distance is well treed.

4.5.52 **Distance from Proposed Development** edge 702m.

Viewpoint 3: View from Treeswoodhead Road south of the KSS.

4.5.53 **The landscape scale and character** - Medium to large scale regular shaped arable farmland surrounding Kilmarnock conurbation. Vegetation is generally limited to the field edge. Some screen buffer planting around the substation, with a proportion of mature conifers. A network of rural lanes to dispersed farmsteads and residential dwellings.

4.5.54 **In the foreground** - Treeswoodhead Road which runs from Kilmarnock town to the crossroads with the A719. Rural lanes with high growing well maintained native deciduous hedgerow vegetation. Limited hedgerow trees along this stretch of road. Roads rises to give clear views of the edge of the Kilmarnock housing estate.

4.5.55 **To the midground** - SP Energy Kilmarnock South Substation is located to the midground and forms a hub for several key overhead lines. The substation is located in a localized dip in the valley which in conjunction with the introduced bunding and screening facilitates screening some of the substation infrastructure. Pylons are prominent in the skyline and radiate towards the substation.

4.5.56 **In the background** - Kilmarnock housing estates can be clearly screened in the distance. Long views over the valley to the Craigie, Branweil and Wardlaw Hills near the towns of Troon and Irvine (10km away).

4.5.57 **Distance from Proposed Development** edge 580m.

Viewpoint 4: View from Treeswoodhead Road bridge over the A77 Kilmarnock Bypass.

4.5.58 **The landscape scale and character -** Rural edge of Kilmarnock, agricultural land stretches out to the east and south of the town. Medium scale fields, with vegetation generally limited to the field/ water's edge.

4.5.59 **In the foreground -** Overbridge on the A77. Treeswoodhead Road runs from Kilmarnock town to the crossroads with the A719. To the foreground there is limited roadside vegetation with some native hedgerows and trees. Hedgerow has run to over mature and gappy allowing long views over the arable landscape.

4.5.60 **To the midground** some of the substation infrastructure is visible over the screen vegetation. Settlements and farmsteads are well dispersed. The landscape is generally flat with some localized level changes.

4.5.61 **To the background** the land rises up to form a vegetative horizon. Long views over the wide valley to the southern uplands and highlands mountain range.

4.5.62 **Distance from Proposed Development t** edge 1.45km.

Viewpoint 5: View from the residential area on the eastern outskirts of Kilmarnock.

4.5.63 **The landscape scale and character -** Grampian Road with several residential roads running perpendicular (Sidlaw Place, Kinnoull Rd, Cuillin Place) to this road. Houses are 2 storey with direct sometimes slightly impeded views from the ground and first floors over the wide valley. This view is further enhanced as the housing development lies on land slightly higher than the surrounding eastern landscape.

4.5.64 **In the foreground -** Housing estate with arable farmland buffering the A77 bypass. Post and wire fence to the field edge boundary with intermittent hedgerow trees allowing views though to the wide valley.

4.5.65 **To the midground -** The arable land stretches out in a familiar pattern of medium to large scale fields with the majority of vegetation to the field edge. The land pattern amalgamates to give the impression of a vegetative horizon.

4.5.66 **To the background** - Views stretch out across the wise valley and beyond to the southern uplands and highlands mountain range. Beyond the land rises with some denser planted areas to the higher ground. The pylons are a consistent feature on the skyline.

4.5.67 **Distance from Proposed Development** 1.9km.

Viewpoint 6: View from the A76.

4.5.68 **The landscape scale and character -** Medium to large scale fields on both sides of the road. Just out of shot is the HMP Kilmarnock which is effectively screened by large belts of mature vegetation. The landscape is arable with limited vegetative screening.

4.5.69 **In the foreground -** Post and rail fence forms the boundary to the arable field edge, Vegetation limited to the field boundary is intermittent. Native hedgerows are managed but with few hedgerow trees. Pylon lines are prominent in the skyline and radiate towards Kilmarnock substation in the southeast.

4.5.70 **To the midground -** The land rises up slightly towards the Haning Mains farmstead. Around the farm building and out houses there are some mature native deciduous vegetation. Again, the field boundary edge is intermittent but managed. There are belts of mature deciduous vegetation which form the vegetative horizon to the southeast.

4.5.71 **To the background** - The land rises gently up to the south. The farmsteads are scattered and well dispersed within the landscape. Most of the landscape is given to fields, on the higher ground to the south. There is some woodland to higher ground and around Cessnock Water. Pylons are visible on the horizon.

4.5.72 **Distance from Proposed Development** 1.12km.

Viewpoint 7: View from Low Dallars Farm, looking in a northerly direction.

4.5.73 **The landscape scale and character -** Medium to large scale regular shaped arable farmland. Vegetation is generally limited to the field edge. Some screening around residential properties, planting along Cressock Water. A network of rural lanes to dispersed farmsteads and residential dwellings.

4.5.74 **In the foreground -** Property edge of Dallars House. The property is generally screened on all sides, allowing only intermittent views out through gaps in the deciduous native vegetation. This assessment was taken at the narrowest section of the screen buffer, to the remaining areas Dallars House and outbuildings is well screened to all sides with a dense vegetative belt forming a woodland in places. Dallars House (previously known as Auchenskeigh) was built in 1775. It is a Category B listed Georgian mansion built of sandstone. In 1995 major renovation work took place at the house.

4.5.75 **To the midground -** Low Dallars Farm is located to the mid ground and is surrounded by medium to large scale arable fields. Mature deciduous native vegetation to the field boundaries breaks up the longer views over the wide flat valley. Vegetation surrounding Cessnock Water can be seen as it meanders through the countryside.

4.5.76 **To the background** the pylons that surround the Kilmarnock South Substation can be seen. The substation is located in a localized dip in the valley which in conjunction with the introduced bunding and screening facilitates screens for the majority of the substation infrastructure. Pylons are prominent in the skyline and radiate towards the substation.

4.5.77 **Distance from Proposed Development** edge 1.4km.

Viewpoint 8: View from the property edge of Dallars House

4.5.78 **The landscape scale and character -** Medium to large scale regular shaped arable farmland surrounding Kilmarnock conurbation. Vegetation is generally limited to the field edge. Some screen buffer planting around the substation, with a proportion of mature conifers. A network of rural lanes to dispersed farmsteads and residential dwellings.

4.5.79 **In the foreground -** Farm track with direct views of the proposed development. Medium to large scale arable fields with very limited vegetation to the field edge.

4.5.80 **To the midground -** SP Energy Kilmarnock South Substation is located to the midground and forms a hub for several key overhead lines. The substation is located in a localized dip in the valley which in conjunction with the introduced bunding and screening facilitates screening some of the substation infrastructure. Pylons are prominent in the skyline and radiate towards the substation.

4.5.81 **To the background -** The land gently rises preventing long views.

4.5.82 **Distance from Proposed Development** edge 735m.

4.5.83 The visual baseline along with photography is provided in Volume 2 Appendix 4-F and describes the current situation present at the time of site assessment. Discounted Landscape Photographs can be seen in Volume 2, Appendix 4-B.

4.6 Design, Mitigation and Enhancement Measures

Potential Impacts

4.6.1 The Scheme has been developed to consider the likely significant effects and constraints. The design and embedded (i.e., primary migration) measures undertaken look to either avoid, reduce or offset potential adverse effects on the landscape, visual amenity and the views.

4.6.2 The aims of mitigation are to ensure that the Proposed Scheme is, as much as possible, in keeping with the local landscape character and makes the best use of the existing landscape features. This is influenced by the surrounding character of the landscape and the existing and potential viewers.

4.6.3 The landscape and visual effects of the Proposed Scheme have been mitigated as far as possible, to avoid, prevent, reduce or offset effects through the design for the life of the Proposed Scheme. This is comprised of primary and secondary measures. Primary measures have been developed through the iterative design process, which have become integrated or embedded into the project design along with standard construction and operational management practices for avoiding and reducing environmental effects. Secondary measures are designed to address any residual adverse effects remaining after primary measures and standard construction practices have been incorporated.

Construction Mitigation

4.6.4 Measures to mitigate landscape and visual effects will be implemented during the construction phase of the Proposed Scheme to minimise impacts. Mitigation (to be included in the CEMP) shall include, but not be limited to:

- Ensuring that soil structures are protected where land would be used temporarily, such as for compounds, re-grading areas etc. so that when it is returned to the existing land use, it is in a suitable condition.
- Stripping, handling and management of soils to be in accordance with DEFRA (2009) Construction Code of Practice for the sustainable use of soils on constructions sites (Ref 4-23); and Considerate Construction management.
- Ensure that existing vegetation and other landscape features are protected and retained wherever possible, in accordance with BS5837:2012 (Ref 4-24).
- Perimeter fencing, maintain a tidy site and temporary screen bunding.
- All adjacent trees to be kept must be adequately protected by strong fencing, which should be maintained throughout the length of the construction period. This fencing should be positioned at least around the canopy spread of the trees - and further, if possible. Within the fencing, no materials should be stored, no fires lit and no soil compacted. Care should also be taken to safeguard trees which overhang the outside site boundary.
- Vegetation clearance to be undertaken outside the bird nesting season between March and August otherwise guidance will be required from an ecologist.

- Invasive species management via vigilance being maintained through the works for the presence of invasive species. If an invasive species is discovered on the Proposed Scheme a suitably qualified ecologist should be contacted for advice. Himalayan Balsam is located adjacent to the site, appropriate safety measures should be adopted to avoid spread.

4.6.5 In addition to the above measures, reference should be made to the construction mitigation recommendations identified in Chapter 5 Ecology and Biodiversity, of this EIAR, and regarding hedgerow retention measures.

Operation Mitigation

4.6.6 Mitigation of landscape and visual effects during the operation measures aim to prevent/avoid, reduce and where possible remedy the landscape and visual effects. The following design measures have been suggested within Volume 2, Appendix 4-C Landscape General Arrangement Plan.

- The proposed buffer planting will restrict some of the views of the proposed development/ enhancement planting and will have a graded profile from rough grass and herb through to shrubs and small trees to ensure optimum screening and biodiversity.
- Through careful siting and design of the development and its approaches, some vegetation strands have been retained.
- Native planting will be used along the buffer strips as these help to maintain the distinctive local types of vegetation. As well as using species that occur naturally in the soil type as these would benefit local conservation and integration with the landscape.
- An element of evergreen planting to the screen boundary in order to facilitate screening during the winter months. All planting should be local provenience and in keeping with the agricultural lowlands and lowland river valleys style of planting.
- Where appropriate the hedgerow would benefit from under planting/gapping up and the introduction of a more varied species mix. In particular a mix should encourage the introduction plants that provide wildlife value and should be chosen for their ability to provide several key elements that are essential to local wildlife, including: the availability of shelter; a source of food, either provided directly from the hedging plants in the form of berries or through the attractiveness of the hedging plants to insects on which birds feed; and adequate nesting sites.
- Habitat connectivity will be achieved throughout the Proposed Schemewith the introduction of native woodland, enhancement of the existing hedgerows and the creation of wildflower areas.
- Planting should amalgamate and enhance the existing planting around the proposed site.
- The planting complies with and supports landscape management strategies set by local authorities for this landscape character area.

Mitigation Incorporated into the Design

4.6.7 A number of considerations have influenced the design from the initial concept of the project through to the final design. The landscape proposals are shown on the Landscape General Arrangement plan in Volume 2, Appendix 4-C, of this EIAR. The landscape design seeks to:

- Retain and enhance existing vegetation within the Site.
- Complement and reinforce the special characteristics of the surrounding landscape in the study area.
- Screen views of the Proposed Scheme from sensitive visual receptors and limit and manage views from the wider landscape.
- Restore and strengthen existing landscape elements, including the reconnection of fragmented landscape elements.
- Diversify the range of landscape elements within the Site.

4.6.8 The design has intentionally proposed heavily planted green corridors to the east and south of the BESS facility to reduce the visual impact on neighbouring residents and to enhance ecological connectivity within the landscape. The planting design and species choices have been guided by the surrounding landcover patterns, habitats and plant species found locally and identified in the local landscape character assessments.

4.6.9 Additional mitigation measures for consideration have been detailed below in Table 4-9. Tables 4-10 and 4-11 include suggestions of tree and shrub planting that would be suitable to act as a security deterrent again for consideration at detailed design.

Table 4-9: Mitigation Measures for consideration at detailed design

Design Considerations

Design Elements	Issue	Design Measures
Screening		• Planting a mix of different trees and shrubs. A mixed planting also increases the biodiversity in the landscape by creating habitat for beneficial insects, birds, and animals. • Install multiple staggered rows of trees and shrubs. • Multiple staggered rows provide protection from prevailing winter winds or reduce noise from traffic or equipment. • Multiple staggered rows can be installed using two or three rows of trees and shrubs. • The spacing should be based on the average diameter of the plants at maturity. Each successive row is offset or staggered so that the plant fills the visible gap between each of the plants in the previous row. • To further enhance the screening, a third row of similar size or smaller plants can be planted. The major benefit of this planting arrangement is that gaps fill in quickly and total screening is achieved more rapidly than a single row.
Security Fencing		• Suggest use of mesh security fencing which conforms to Secured by Design and LPS1175. • This is 36% solid and 64% open allowing an open atmosphere. • Wire spacing (12.5mm), the component which denies potential intruders any footholds thus making it difficult to climb. • Fencing and gates installed at the complex match in RAL colour which provides a professional and uniform look, contributing to the overall sense of unity and cohesion.
Planting	No removal of vegetation expected	• Additional screen and enhancement planting proposed. • Native planting was used, as these species help to maintain the distinctive local types of vegetation. As well as choosing species that occur naturally in the soil type adjacent to the road. • Plant species were also chosen so that they benefited local conservation benefits, integration with the landscape. • The planting also helped to reinforce the mitigation effects and to soften the created landform and lighting as it matures. • The planting complies with and supports landscape management strategies set by local authorities for the landscape character areas. • Planting has been set out in varying blocks of woodland, woodland edge planting, proposed wildflower planting to provide visual interest and diversity.
Hedge mix		• RSPB Approved Ultimate Bird Friendly bundle • The hedging plants in this Ultimate RSPB hedging pack have been chosen for their ability to provide garden birds with dense foliage for nesting; berries to provide a bird feast; and, as these hedge plants are also popular with the insects that birds feed on, this provides an additional food source. As these hedging species hold huge ornamental value in the form of vibrant flowers and blazing autumn colours, you don't have to worry about compromising attractiveness for functionality; our RSPB approved Ultimate Bird Friendly Bundle provides both. ▪ Hawthorn (Crataegus monogyna) - one of the best native hedging plants for British wildlife. ▪ Blackthorn (Prunus spinosa) - prickly stems to protect resting and nesting sites, and abundant sloes in autumn. ▪ Field Maple (Acer campestre) - popular with a variety of insects on which birds feed. ▪ Alder (Alnus glutinosa) - a native species with seeds that are a vital food source for many birds. ▪ Wild Privet (Ligustrum vulgare) - semi-evergreen foliage makes a great nesting site. ▪ Wild Cherry (Prunus avium) - huge wildlife value and wonderful seasonal interest. ▪ Bird Cherry (Prunus padus) – the small black cherries are adored by many bird species; gorgeous flowers attract many insects. ▪ Dog Rose (Rosa canina) - seasonal colour provided by jewel-like red autumn berries as well as white spring flowers. ▪ Spindle (Euonymus europaeus) - seasonal colour provided by pink capsules & orange fruits, with dark red foliage in autumn. ▪ Juneberry (Amelanchier lamarcki) - gorgeous spring white flowers with dark red berries in summer which turn purple black in autumn.

Design Considerations		
Design Elements	**Issue**	**Design Measures**
Security planting		• Planting prickly hedges and thorny climbing plants can not only make landscaped areas look attractive and environmentally friendly but can also act as a powerful deterrent to would-be intruders, as well as act as a means to channel movement and behaviour. • Plants can also be used on their own as a natural deterrent, or in conjunction with physical barriers such as fences, walls, ditches and berms, providing an additional barrier. • They can also reduce the harsh visual impact of traditional barriers, making a more visually pleasing and less "fortress-like" security measure. These are some common shrubs that are both colourful and very prickly to touch.
Swale Design		• Guidance on good practice in the management and creation of small water bodies in Scotland', published by SEPA. • Swales should be shallow with side slopes no more than 1 in 3 to allow flow across the edge, easy maintenance and safe access. • Normal grass swales require cutting at 75 – 100mm, not to exceed 150mm, to prevent grass falling over due to wind or water. Where meadow or wet swales develop, the vegetation is resistant to collapse, and an annual or bi-annual cut will be sufficient to ensure the swale works effectively. Where long grass is cut in swales, arisings should be taken away to prevent problems further downstream. • Swales are usually mown grass but can be meadow, wetland or open woodland provided a dense ground vegetation is retained.

Deterrent Shrub Planting

Table 4-10: Mitigation Measures for consideration at detailed design

SHRUB SPECIES -Design Considerations			
Genus	**Species**	**Defensive Properties**	**Height**
Berberis	vulgaris (Common Barberry)	• A large thorny shrub with razor-sharp leaves	1.5
Crataegus	monogyna (Hawthorn)	• Native to Britain this shrub or tree is ideal for a hedge barrier. White flowers	7+ (tree)
Genista	hispanica (Spanish gorse)	• A low-growing dense shrub with yellow flowers. Requires dry soil and sun	1
Ilex	aquifolium (Common holly)	• Native to Britain and ideal for barrier plantings. Grows on most soil types	2
Prunus	spinosa (Blackthorn, Sloe)	• Native to Britain, this is an excellent dense defensive shrub or small tree. Produces sloe berries	1.8
Rhamnus	frangula (Alder Buckthorn)	• Native to Britain, a vigorous growing shrub ideal for wet, peaty soils	1.5
Rosa	rugosa (many available)	• Very spiny stems with large flowers. White flowers	1.5
Ulex	europaeus (Common Goarse)	• Native to Britain this is a superb barrier shrub, which will grow well on poor dry soils	1.5
Ulex	europaeus	• As above, but with double yellow flowers	

Deterrent Tree Planting

Table 4-11: Mitigation Measures for consideration at detailed design

TREE SPECIES -Design Considerations

Genus	Species	Defensive Properties	Height
Acer	Platanoides (Norway Maple)	A slow growing deciduous tree with good autumn colour and a compact oval habit of growth	15+
Betula	utilis var. Jacquemontii (Himalayan Birch)	A deciduous tree with striking white bark after four or five years. A slender habit of growth	12
Crataegus	Monogyna (Hawthorn)	A small thorny deciduous tree, or tall hedge, of dense spreading habit	8
Prunus	Spinosa (Blackthorn)	A dense small and bushy tree	8
Quercus	Robur (English Oak)	A deciduous upright Oak with dense branches	16
Sorbus	aucuparia (Rowan and Mountain-Ash)	A deciduous upright tree with good autumn colour and distinctive yellow berries	9
Acer	Platanoides (Norway Maple)	A slow growing deciduous tree with good autumn colour and a compact oval habit of growth	15+
Betula	utilis var. Jacquemontii (Himalayan Birch)	A deciduous tree with striking white bark after four or five years. A slender habit of growth	12
Crataegus	Monogyna (Hawthorn)	A small thorny deciduous tree, or tall hedge, of dense spreading habit	8

4.6.10 The planting plan during the construction phase has assumed the proposed planting would be of the following specification:

- Proposed tree and shrub planting would range in height from 0.6-0.9 m for whips;
- Semi mature trees would be 4m in height and;
- Areas of amenity/wildflower grassland would yet to be fully established.

4.6.11 It is assumed during operation (year 15) the planted vegetation would have matured to the following specifications:

- Proposed tree and shrub planting would range in height from 5 to 6 m;
- Semi mature trees would be 10 m in height.
- Species-rich grassland would have established – 0.5 m
- Hedgerow would be 2 m high.
- Amenity/wildflower grassland would have established.

4.6.12 As the mitigation measures establish over the operational phase (years 1 to 15), they would increasingly fulfill their intended functions in providing screening, landscape integration, amenity and soft estate improvements, leading to a reduction/mitigation of the adverse changes to landscape elements, visual amenity and landscape character resulting from the Proposed Scheme. They would lead to a positive change to the condition and quality of the landscape within the Proposed Scheme boundary, improving the overall character and diversity of the soft estate of the Proposed Scheme within the local landscape setting.

Ecological Design Considerations

4.6.13 Ecological enhancement measures have been incorporated into the landscape design which will be of value to wildlife, and compensate for the loss of habitat on the Proposed Scheme, such as:

- Defunct hedgerows enhancement with native shrub species, such as hazel, holly, dog rose, blackthorn, guelder-rose, hawthorn and elder. These would provide a benefit to invertebrates and birds;
- Native tree planting in particular those that are berry-forming (e.g., rowan (Sorbus aucuparia) and wild cherry (Prunus avium));
- Native species to be of local provenance;
- Wildflower grassland margins to provide larval food for caterpillars and to attract butterfly and moth species; and
- Attenuation pond.

Lighting

4.6.14 Temporary flood lighting for safety reasons would be installed at the Site compound.

4.6.15 During the winter period when daylight hours are reduced, task lighting would be placed within the confines of the Site compound. Tower lights would be positioned at key access points during these winter periods to allow safe access into the Site compound. Additional tower lights would be positioned within key areas of the work site. All lighting would face in a downward direction to avoid light spill onto adjacent land and sensitive receptors.

4.6.16 In line with best practice guidance relating to lighting and biodiversity, during operation security lighting columns will be motion sensitive (for example, controlled by an infrared monitor sensor system), and will switch on only when movement within the Site is detected when essential operational maintenance is required. The emergency lighting will be highly directional (for example, controlled by cowling) to avoid excessive light spillage beyond the boundary fencing. The emerging lighting design will be undertaken with reference to the relevant guidance such as the “Guidance Note 01/21 for the Reduction of Obtrusive Light” Ref-25.

4.6.17 For bats any new lighting should not exceed 1 lux in output capacity.

Decommissioning

4.6.18 The details regarding timing and nature of future Scheme decommissioning are unknown beyond expected the design life of the Scheme of 40 years. However, the mitigation measures set out in this section for construction will also be appropriate mitigation during the decommissioning stage.

4.7 Assessment of Likely Significant Effects

4.7.1 This section presents the assessment of landscape and visual effects based on the receptors identified in Section 4.5 above. Judgements are made on the sensitivity, magnitude of change and level of effect for each receptor at the construction phase and operation phase, once mitigation vegetation has been established. These judgements are based on the methodology and criteria set out in Section 4.3.

Landscape Character

4.7.2 The relative sensitivity of the landscape character is provided in Table 4-12 below. The sensitivity of the landscape character to the Proposed Scheme is considered to be medium. The relatively intact medium-scale open arable farmland is already influenced by the presence of existing main roads and residential developments to the conurbation edge. This indicates that the area has some capacity to accommodate the changes to the landscape without creating undue detriment to the landscape components.

Table 4-12: Landscape Sensitivity

Regional LCT	Quality Condition	Key Characteristics	Susceptibility	Sensitivity
LCT 66 Agricultural Lowlands-Ayrshire	Good	▪ *Complex landform, gently increasing in height from the coastal fringe, dissected by many burns and streams draining to incised main river valleys to create an undulating lowland landscape.* ▪ *Generally small to medium scale landscape.* ▪ *Landcover is predominantly pastoral, with some arable on lower and better soils.* ▪ *Fields often regular in shape and enclosed by beech or hawthorn hedges, with mature hedgerow trees giving the landscape a surprisingly wooded character.* ▪ *Settlement pattern historic in origin based upon larger, more self-contained farmsteads set in a hinterland of fields.* ▪ *Number of larger towns and villages with historic cores surrounded by more modern development.* ▪ *Dense network of often very rural minor roads.* ▪ *Varying landscape character which ranges from very rural to more fragmented and developed landscapes on urban fringes.* ▪ *Views tend to be dictated by the local topography and landcover.*	Medium	Medium
LCT 68 Lower River Valleys-Ayrshire	Good	▪ *Pastoral farming character with hedgerow field boundaries and valley slopes which are frequently wooded with stands of beech and semi-natural woodland.* ▪ *Rich woodland of the river valleys often incorporated into designed landscapes.* ▪ *Intimate small-scale landscapes which often lie hidden within the wider agricultural lowlands.* ▪ *Views tend to be enclosed, short distance and focused along the diverse river valley landscape. There are open elevated views over the valleys from settlements and roads sited on upper slopes.*	Medium	Medium

4.7.3 Examples of the types of landscape character can be seen on the Field Study Sheets, provided in Volume 2, Appendix 4-G.

Landscape Construction Effects

4.7.4 During the construction period, landscape changes would be generated by activities such as the introduction of contractor's compounds, storage areas, security fencing and signage; and the associated construction traffic movements which would be transient and temporary in nature. Machinery used on the development site would include haulage lorries and concrete mixer lorries.

4.7.5 Construction activities, such as listed below, would result in a disruptive character to the local landscape during the works;

- Site preparation, the laying of hardstanding and the building of structures;
- Erection of site hoarding and protective fencing for retained vegetation;
- Offloading equipment and construction of the foundations;
- Fit out of equipment;
- Installing electric cabling on site and the installation of cabling between the development and the existing substation;
- Site restoration and landscaping, including earth movement. This would be carried out as soon as possible and in a progressive manner and;
- Additional vehicle movements on local roads over the construction period of approximately 12-18 months.

4.7.6 The temporary construction compound, working areas (including welfare facilities, site office, parking storage) would also bring temporary uncharacteristic detractors into the local character area. During the construction phase, temporary task-specific floodlighting might be necessary during winter months along with temporary security lighting in the contractor's compound and car park areas.

4.7.7 The negative effects of construction-related lighting can be reduced through appropriate design and construction management practices identified in the mitigation section 4.8.

4.7.8 Construction effects would be largely temporary, in part reversible and intermittent throughout the construction phase. The construction of the development would take place as a single development operation.

4.7.9 The sensitivity of the landscape for both of the LCTs (LCT66 and LCT68) is medium and in general this landscape has the ability to absorb some of the effects of the development. The magnitude of the impact would be low as the development will involve a partial loss or alteration to key characteristics of the character and/or setting of the character area for a temporary and short period of time. It will also introduce elements that noticeably alter the character or tranquility of the area. The significance of the effect at construction stage would be moderate adverse.

Landscape Operational Effects

4.7.10 The facility would be in operation 24/7 as it is used to import, store and export electricity on demand. There would be no significant traffic impacts in the operational phase as the Proposed Scheme is remotely controlled. A maintenance visit would only be required by an engineer on a monthly basis as the facility is unmanned and not open to the public.

4.7.11 By Year 15 the mitigation planting within the Site and along the development edge would have matured. In addition, new tree planting, buffer planting and attenuation pond would increase the biodiversity of the local landscape.

4.7.12 However, the presence of the development would remain, with the loss of the open arable farmland which cannot be mitigated. The landscape has the potential to absorb a partial loss or alteration to some key characteristics of the character and/or setting of the character area.

4.7.13 Lighting on the Site would be kept to the minimum as the Site would only be used on a temporary basis when maintenance staff must access, or when a security breach triggers the lights. The following potential lighting impacts from the operational phase of the Proposed Scheme are listed below:

- potential glare and light spill from security lighting:
- lighting would be fitted to CCTV columns and containers as required for safe working:
- lighting would be low level directional LES lighting, with the addition of light shield shrouds that will help prevent upwards light spillage.

4.7.14 The adverse effects of lighting during operational phase would be localized through the appropriate design according to the Guidance Notes for the Reduction of Obtrusive Light GN01:2011. (Ref 4-25)

4.7.15 Any lighting would be designed to comply with the guidance contained within BS5489-1:2003 (Ref 4-26) and BS13201-2:2003 (Ref 4-27).

4.7.16 Further assessment of the local landscape character can be found in the survey sheets Volume 2, Appendix 4-G Landscape Field Survey Sheets.

Landscape Decommissioning Effects

4.7.17 The decommissioning of the Proposed Scheme is expected to be 40 years after construction and would take place under a Decommissioning Environmental Management Plan. Since further landscape and visual assessment will occur at this point, and decommissioning effects are likely to be similar to the above construction effects (i.e., there are likely to be minor to major adverse for example] adverse impacts on landscape and Negligible to Moderate, adverse on visual effects), decommissioning of the Proposed Scheme has not been considered further.

Assessment of Visual Effects

4.7.18 This section presents the assessment of visual effects upon the representative viewpoints during the construction and operational periods.

4.7.19 A site survey was undertaken by a Chartered Landscape Architect, who visited the study area in June 2022 and again in May and August 2024, when vegetation was in leaf.

4.7.20 Mitigation has been addressed as part of the design and is considered during the assessment process. The sensitivity of the visual receptors to changes resulting from the Proposed Scheme has been described on the viewpoint photos sheets in Volume 2, Appendix 4-D Photomontages with the Proposed Scheme and Appendix 4-F Visual Assessment Sheets with Photomontages, of this EIAR.

4.7.21 The operational phase assessment considers the short-term, medium- and long-term effects of the Proposed Scheme from the end of the construction period to the fifteenth year of operation, whilst the proposed landscape and ecological mitigation is establishing.

4.7.22 Landscape mitigation measures developed as part of the design process identified opportunities to reduce the adverse effects and to ensure that the Proposed Scheme is better embedded into the landscape setting and views. These mitigation measures have been considered in the assessments.

4.7.23 For the purposes of this assessment the operation assessment has been undertaken at Year 15 summer, /winter when the proposed screening will have reached a good level of maturity and vegetative cover will be at an optimum.

4.7.24 Views taken but discounted (see Volume Appendix 4-B, of this EIAR) have been included within the assessment for reference. This includes a photograph taken from the top floor of the Dallar's House property. The receptor currently lives on the top floor and uses the balcony space. The photographs were taken in the summer months in full leaf when there are no views of the Proposed Scheme. Even in winter, when views will open, the view will be distant and filtered. Also discounted are views of Barnwell Drive, Hurlford. Due to dense vegetation, topography and distance, no discernible views are expected from this location in either the summer or winter months.

Visual Construction Effects

4.7.25 The construction phase assessment considers the short-term effects of the Site, from the start to the end of the construction period, before the proposed landscape and ecological mitigation is establishing.

4.7.26 Viewpoint Photomontage sheets can be found Volume 2, Appendix 4-D Photomontages with the Proposed Scheme and Appendix 4-F Visual Assessment Sheets with Photomontages. Assessment Sheets provide a detailed assessment of construction effects. These assess the baseline conditions, the impact of the development in construction on the different receptors. A brief description of the effects can be found listed below for each viewpoint:

Viewpoint 1

4.7.27 Summer -Construction will be obvious to the farm and agricultural workers. However, the residential building within the farm compound is screened by agricultural outbuildings. There will be a direct unimpeded view of the development as there is no intermittent screening. Construction activities that will be visible include site preparation, erection of site hoarding, offloading equipment, earth movement and additional vehicle movements.

4.7.28 Winter- At construction views will be direct and unimpeded, there is nothing to the foreground to soften the construction work being undertaken.

Agricultural Workers

4.7.29 Agricultural workers are considered low sensitivity. The magnitude of change during construction is considered medium. The significance of effect is therefore considered **Moderate adverse (Significant)**.

Residential receptors – farm owners

4.7.30 Residential receptors – farm owners are considered high sensitivity. The magnitude of change during construction is considered high. The significance of effect is therefore considered **Major adverse (Significant)**.

Transient receptors – PRoW users

4.7.31 Transient receptors are considered high sensitivity. The magnitude of change during construction is considered high. The significance of effect is therefore considered **Major adverse (Significant)**.

Viewpoint 2

4.7.32 Summer- There are bands of mature evergreen vegetation to the property edge, around the substation and to the field edge. These will limit views of the construction activities to a certain height. There will be additional vehicle movements on local roads over the construction period of approximately 12-18 months.

4.7.33 Winter-Views will open up a little in the winter months as most of the vegetation is deciduous around the substation with some strands of evergreen vegetation on the bunding. This will limit views of some of the construction work beyond.

Agricultural Workers

4.7.34 Agricultural workers are considered low sensitivity. The magnitude of change during construction is considered medium. The significance of effect is therefore considered **Moderate adverse (Significant)**.

Transient receptors - PRoW users

4.7.35 PRoW receptors are considered high sensitivity. The magnitude of change during construction is considered medium. The significance of effect is therefore considered **Moderate adverse (Significant)**.

Viewpoint 3

4.7.36 Summer- Views of the construction works will be intermittent and filtered from this distance in the summer months due to the intervening vegetation and high roadside hedgerows. Glimpse views of the site preparation and the construction compound in the distance.

4.7.37 Winter - Even though the vegetation is mostly native deciduous and semi mature to mature, views will open up in the winter months.

Transient receptors - agricultural workers, local pathways and local workers

4.7.38 Transient receptors are considered low sensitivity. The magnitude of change during construction is considered medium. The significance of effect is therefore considered **Minor adverse (Not Significant)**.

Viewpoint 4

4.7.39 Summer - The intermittent vegetation will screen most of the works unless construction equipment involves the use of cranes. However, views will be distant and transient, works will be barely perceptible from this location.

4.7.40 Winter - Due to the deciduous nature of the vegetation views will open in the winter. The construction site benefits in some locations from the mature evergreen planting that has developed on the bunding surrounding the substation. This will screen some of the construction activity, unless higher construction equipment is in use such as cranes.

Transient receptors - agricultural workers, local pathways and local workers

4.7.41 Transient receptors are considered low sensitivity. The magnitude of change during construction is considered low. The significance of effect is therefore considered **Minor adverse (Not Significant)**.

Viewpoint 5

4.7.42 Summer - The proposed site benefits from some existing screening and bunding around the substation, and to the field edges which filter visibility. However, at this distance (1.9km) even with the potential use of cranes for construction of the development, this is but a fleeting change within the wider view. Potentially residents from the top floor have a better chance of viewing the construction but it will be barely perceptible within the wider view.

4.7.43 Winter - The views will open up in the winter as most of the vegetation is native and deciduous. High colored construction equipment may be visible from this distance in contrast to the muted winter tones of the surrounding landscape. However, even so the change in view will be minimal and at a distance.

Transient receptors - agricultural workers, local pathways and local workers

4.7.44 Transient receptors are considered low sensitivity. The magnitude of change during construction is considered low. The significance of effect is therefore considered **Minor adverse (Not Significant)**.

Residential receptors – housing estate

4.7.45 Housing estate are are considered high sensitivity. The magnitude of change during construction is considered low. The significance of effect is therefore considered **Minor adverse (Not Significant)**.

Viewpoint 6

4.7.46 Summer - Established vegetative screening and bunding around the substation, and around Cressnock Water will help screen the construction works. Construction impacts will be barely perceptible in the distance, and the views are fleeting.

4.7.47 Winter -Views will open up in the winter months but at this distance construction works will be barely perceptible.

Transient receptors - agricultural workers, local pathways and local workers

4.7.48 Transient receptors, agricultural workers and users of the A46 are considered low sensitivity. The magnitude of change during construction is considered low. The significance of effect is therefore considered **Minor adverse (Not Significant)**.

Viewpoint 7

4.7.49 Summer - Views of the construction works will be intermittent and filtered from this distance in the summer months due to the intervening vegetation and distance from the Proposed Development.

4.7.50 Winter - As the vegetation is mostly native deciduous and semi mature to mature views will open up in the winter months. There will only be a slight loss or damage to the visual receptors due to distance and the limited extent of view impacted upon.

Residential receptors – farm owner

4.7.51 Residential receptors, Dallars House are considered high sensitivity. The magnitude of change during construction is considered medium. The significance of effect is therefore considered **Moderate adverse (Significant)**.

Viewpoint 8

4.7.52 Summer - Construction will be obvious to the farm and agricultural workers. There will be a direct and unimpeded view of the development as there is no substantial intermittent screening. Construction activities that will be visible include site preparation, erection of site hoarding, offloading equipment, earth movement and additional vehicle movements.

4.7.53 Winter - As the vegetation is mostly native deciduous and semi mature to mature views will open in the winter months. Construction views will be direct and unimpeded, there is nothing to the foreground to soften the construction works being undertaken.

Residential receptors – farm owner

4.7.54 Residential receptors, Low Dallars Farm are considered high sensitivity. The magnitude of change during construction is considered high. The significance of effect is therefore considered **Major adverse (Significant)**.

Transient receptors – agricultural workers

4.7.55 Transient receptors, agricultural workers are considered low sensitivity. The magnitude of change during construction is considered medium. The significance of effect is therefore considered **Moderate adverse (Significant)**.

Visual Operation Effects

4.7.56 The operation phase assessment considers the medium- and long-term effects of the Site, from the end of the construction period to the fifteenth year of operation, whilst the proposed landscape and ecological mitigation is establishing.

4.7.57 Landscape mitigation measures should be developed as part of the design process, with opportunities identified and developed to reduce the adverse effects and to ensure that the Site is better situated in a landscape setting. These mitigation measures will be integral to the Site and have been suggested within each of the viewpoint assessments.

4.7.58 Visual assessment sheets with photomontages are provided in Volume 2, Appendix 4-F Visual Assessment Sheets with Photomontages. Photomontages and Assessment Sheets provide a detailed assessment of operation effects. These assess the impact of the development in construction/operations on the different receptors. A brief description of the effects can be found listed below by viewpoint.

Viewpoint 1

4.7.59 Summer - By Operation Year 15 the screen vegetation around the development edge will have matured and will soften the infrastructure. Potentially the lighting infrastructure/ lighting haze could still

be glimpsed through the maturing vegetation. However, this will be infrequent as the site is unmanned and lighting will only come on with the monthly check is carried out or when there is a security breach.

4.7.60 Winter - At construction views will be direct and unimpeded, there is nothing to the foreground to soften the construction being undertaken. By Operation Year 15 planting will be used to mitigate the development fringe. The planting style will tie into the surrounding landscape planting of native deciduous. Potentially this will allow glimpse views of the development and of the lighting infrastructure in the winter months. Additionally, although intermittent, the lighting haze could be visible in this rural landscape.

Agricultural workers

4.7.61 Agricultural workers are considered low sensitivity. The magnitude of change during operation is considered low. The significance of effect is therefore considered **Minor adverse (Not Significant).**

Residential receptors – farm owners

4.7.62 Residential receptors – farm owners are considered high sensitivity. The magnitude of change during operation is considered medium. The significance of effect is therefore considered **Moderate adverse (Significant).**

Transient receptors – PRoW users

4.7.63 Transient receptors – PRoW users are considered high sensitivity. The magnitude of change during operation is considered medium. The significance of effect is therefore considered **Moderate adverse (Significant)**.

Viewpoint 2

4.7.64 Summer - By Operation Year 15 the screen belts will have developed further to enhance screening.

4.7.65 Winter - In the winter, views will open a little as most of the vegetation is deciduous around the substation with some strands of evergreen vegetation on the bunding. By Operation year 15 the view will be filtered and obscured in some instances as the vegetation matures.

Agricultural workers

4.7.66 Agricultural workers are considered low sensitivity. The magnitude of change during operation is considered low. The significance of effect is therefore considered **Minor adverse (Not Significant)**.

Transient receptors – ProW users

4.7.67 Transient receptors – ProW users are considered high sensitivity. The magnitude of change during operation is considered low. The significance of effect is therefore considered **Minor adverse (Not Significant).**

Viewpoint 3

4.7.68 Summer - Once vegetation has established in Summer Year 15, this will soften the infrastructure, but the top section of the Proposed Scheme will remain visible.

4.7.69 Winter - By Year 15 winter a denser screening will have matured around the Proposed Scheme and this will help to further screen the BESS infrastructure, Even though it will open up in the winter months due to its density it will still retain its screening ability to the lower section of the site, The top section of the Proposed Scheme will remain visible due to the elevated nature of the site.

Transient receptors – agricultural workers, local pathways and local workers

4.7.70 Transient receptors - agricultural workers, local pathways and local workers are considered low sensitivity. The magnitude of change during operation is considered low. The significance of effect is therefore considered **Negligible adverse (Not Significant).**

Viewpoint 4

4.7.71 Summer - Views will be distant and transient, works will be barely perceptible from this location.

4.7.72 Winter - Due to the deciduous nature of the vegetation views will open in the winter. However, at this distance 1.45m this will be barely perceptible change in the view. In operation there will be no change in view in either the summer or winter.

Transient receptors – agricultural workers, local pathways and local workers

4.7.73 Transient receptors, agricultural workers, local pathways and local workers are considered low sensitivity. The magnitude of change during operation is considered very low. The significance of effect is therefore considered **Negligible adverse (Not Significant).**

Viewpoint 5

4.7.74 Summer - The proposed site benefits from some existing screening and bunding around the substation, and to the field edges which filters visibility.

4.7.75 Winter - The views will open in the winter as much of the vegetation is native and deciduous. In operation there will be no change in view in either the summer or winter.

Transient receptors – agricultural workers, local pathways and local workers

4.7.76 Transient receptors- agricultural workers, local pathways and local workers are considered low sensitivity. The magnitude of change during operation is considered very low. The significance of effect is therefore considered **Negligible adverse (Not Significant)**.

Residential receptors – housing estate

4.7.77 Housing estate are are considered high sensitivity. The magnitude of change during operation is considered very low. The significance of effect is therefore considered **Negligible adverse (Not Significant)**.

Viewpoint 6

4.7.78 Summer - Established vegetative screening and bunding around the substation, and around Cressnock Water will help screen the works.

4.7.79 Winter - Views will open up in the winter months but at this distance at Operation Year 15 works will not be visible in either the summer or winter.

Transient receptors – agricultural workers and users of the A46

4.7.80 Transient receptors, agricultural workers and users of the A46 are considered low sensitivity. The magnitude of change during operation is considered very low. The significance of effect is therefore considered **Negligible adverse (Not Significant)**.

Viewpoint 7

4.7.81 Summer - Views will be intermittent and filtered from this distance in the summer months due to the intervening vegetation and distance from the Proposed Development.

4.7.82 Winter - As the vegetation is mostly native deciduous and semi mature to mature views will open up in the winter months. There will only be a slight loss or damage to the visual receptors due to distance and the limited extent of view impacted upon. Even when vegetation has established (Operation Year 15) the top section of the site will still be visible as it is located on higher ground. No internal screen planting was allowed as it is a fire hazard. However, the Proposed Schemeis barely perceptible from this viewpoint.

Residential receptor – farm owner

4.7.83 Residential receptors, Dallars House are considered high sensitivity. The magnitude of change during operation is considered low. The significance of effect is therefore considered **Minor adverse (Not Significant).**

Viewpoint 8

4.7.84 Summer – By Year 15 a denser screening will have matured around the proposed development, and this will help to soften the BESS infrastructure. The lighting infrastructure/ lighting haze could still be glimpsed through the maturing vegetation. However, this will be infrequent as the site is unmanned and lighting will only come on with the weekly check is carried out or when there is a security breach.

4.7.85 Winter - As the vegetation is mostly native deciduous and semi mature to mature views will open up in the winter months.

Residential receptors – Low Dollars Farm

4.7.86 Residential receptors, Low Dallars Farm are considered high sensitivity. The magnitude of change during operation is considered medium. The significance of effect is therefore considered **Moderate adverse (Significant)**.

Transient receptors – agricultural workers

4.7.87 Transient receptors, agricultural workers are considered low sensitivity. The magnitude of change during construction is considered low. The significance of effect is therefore considered **Minor adverse (Not Significant)**.

Visual Decommissioning Effects

4.7.88 The decommissioning of the Proposed Scheme is expected to be 40 years after construction and would take place under a Decommissioning Environmental Management Plan. Since further landscape and visual assessment will occur at this point, and decommissioning effects are likely to be similar to the above construction effects (i.e., there are likely to be minor to major adverse for example] adverse impacts on landscape and Negligible to Moderate, adverse on visual effects), decommissioning of the Proposed Scheme has not been considered further.

4.8 Mitigation and Monitoring

4.8.1 No additional mitigation measures beyond the embedded measures identified in Section 4.6 of this chapter are proposed.

4.9 Residual Effects

4.9.1 The residual landscape and visual effects during the construction and operational phases of the Proposed Scheme are summarised in Table 4-13 and Table 4-14 below.

Table 4-13: Summary of residual landscape effects (construction phase)

Description of effect	Sensitivity of receptor	Magnitude of change	Significance of effect	Additional Mitigation and monitoring	Residual effect
LCT 66 Agricultural Lowlands	Medium	Low	Minor adverse (Not Significant)	No additional measures required beyond good construction practice.	Minor adverse (Not Significant)
LCT 68 Lower River Valleys	Medium	Low	Minor adverse (Significant)		Minor adverse (Not Significant)
Viewpoint 1	High	High	Major adverse (Significant)		Major adverse (Significant)
Viewpoint 2	High	Medium	Moderate adverse (Significant)		Moderate adverse (Significant)
Viewpoint 3	Low	Medium	Minor adverse (Not Significant)		Minor Adverse (Not Significant)
Viewpoint 4	Low	Low	Minor adverse (Not Significant)		Minor Adverse (Not Significant)
Viewpoint 5	High	Low	Minor adverse (Not Significant)		Minor Adverse (Not Significant)
Viewpoint 6	Low	Low	Minor Adverse (Not Significant)		Minor Adverse (Not Significant)
Viewpoint 7	High	Medium	Moderate Adverse (Significant)		Moderate Adverse (Significant)
Viewpoint 8	High	High	Major adverse (Significant)		Major adverse (Significant)

Table 4-14: Summary of residual landscape and visual effects (operational phase)

Description of effect	Sensitivity of receptor	Magnitude of change	Significance of effect	Additional Mitigation and monitoring	Residual effect
LCT 66 Agricultural Lowlands	Medium	Low	Minor adverse	No additional measures required beyond the embedded landscape planting as described in Section 4-5, which would mature between year 1 and year 15.	Minor adverse (Not Significant)
LCT 68 Lower River Valleys	Medium	Low	Minor adverse (Significant)		Minor adverse (Not Significant)
Viewpoint 1	High	Medium	Moderate adverse (Significant)		Moderate adverse (Significant)
Viewpoint 2	High	Low	Minor Adverse (Not Significant)		Minor Adverse (Not Significant)
Viewpoint 3	Low	Low	Negligible Adverse (Not Significant)		Negligible Adverse (Not Significant)
Viewpoint 4	Low	Very Low	Negligible Adverse (Not Significant)		Negligible Adverse (Not Significant)
Viewpoint 5	High	Very Low	Negligible Adverse (Not Significant)		Negligible Adverse (Not Significant)

Description of effect	Sensitivity of receptor	Magnitude of change	Significance of effect	Additional Mitigation and monitoring	Residual effect
Viewpoint 6	Low	Very Low	Negligible Adverse (Not Significant		Negligible Adverse (Not Significant)
Viewpoint 7	High	Low	Minor Adverse (Not Significant)		Minor Adverse (Not Significant)
Viewpoint 8	High	Medium	Moderate adverse (Significant)		Moderate Adverse (Significant)

4.10 Summary

Landscape Character

4.10.1 The Site is located adjacent to the existing substation and within the agricultural outskirts of Kilmarnock town. The site currently comprises arable farmland and is located on the edge of Braeheadview farmhouse and outbuildings. Within and to the boundary edge are belts of mature deciduous vegetation.

4.10.2 The Proposed Schemeis likely to have some localised effects on the landscape receptors immediately adjacent to the Proposed Scheme. The wider landscape would remain largely unimpacted by the development proposals due to the intermittent and intervening vegetation and topography.

4.10.3 Landscape effects associated with construction period, would result in a minor adverse and not significant effect. However, by year 15, when the mitigation planting has matured and will partially integrate the development into the wider landscape, the significance of landscape effect would still remain minor adverse. The landscape character and the assessed ability of the landscape to absorb the development would result in no significant impacts on the character of the local landscape.

Visual Receptors and Views

4.10.4 The greatest impacts occur within the closest proximity to the Proposed Scheme.

4.10.5 The impact on the views experienced from Low Dallars Farm would be affected with the introduction of battery storage units and associated infrastructure with moderate adverse and significant effect.

4.10.6 Dallars House, even though it is a sensitive receptor, is at a distance from the Proposed Scheme and there would only be a partial change in the extent of the view impacted.

4.10.7 The remainder of the receptors are either at a distance, transient, views from users of main roads or views from outdoor workers. Operational effects would be minor adverse and or negligible.

4.10.8 The buffer planting around the development would partly screen the recreational, transient and residential viewer experienced by receptors by year 15 for the most part. The rising topography of the Proposed Scheme would allow medium distance views into the surrounding landscape but would be softened through the strategic planting and the management and enhancement of the existing vegetation to the Proposed Scheme boundary.

4.10.9 The quality and management of the existing boundary vegetation would be enhanced through a combination of management, under planting and the development of the screen belt into a more layered structure, improving the screening function. The proposed buffer planting will restrict some of the views of the proposed development/ enhancement planting. Through careful siting and design of the development and its approaches, some vegetation strands have been retained.

4.10.10 The landscape proposals have been developed collaboratively with the ecologists providing a combination of hedgerow and tree planting along with a block of woodland planting to provide ecological and landscape connectivity whilst reflecting the characteristics and structure of the wider landscape. Habitat connectivity will be enhanced throughout the Proposed Schemewith the introduction of native woodland, enhancement of the existing hedgerows and the creation of wildflower

areas. All planting will be of local provenience and in keeping with the agricultural lowlands and lowland river valleys style of planting.

Monitoring

4.10.11 It is recommended that the Contractor carry out environmental monitoring, aftercare and management for the 12-month Aftercare Period following completion of the works.

4.10.12 During construction it would be essential to monitor the ground preparation works for all planting areas, as compacted ground severely affects the success of planting establishment.

4.10.13 During the 12-month Aftercare Period, the Contractor would review the effectiveness of the environmental mitigation against their intended function and would provide any remedial actions as required.

4.10.14 A high standard of landscape maintenance is required throughout the maintenance periods and monitoring would be required to ensure that this standard is maintained. Ongoing management activities and inspections during the first five years would provide the opportunity to identify any further work or measures required to deliver the required level of mitigation.

4.10.15 Monitoring of mature trees following construction and a woodland management plan. Thinning, coppicing and replanting of newly planted woodlands would be carried out particularly when densely planted smaller nursery stock is used. This would maintain a structurally diverse and species rich woodland shelter belt.

4.10.16 Monitoring of new structural planting, particularly along the boundaries of the Proposed Scheme, to encourage successful establishment and ensure it provides the necessary degree of visual screening, where appropriate. Failed stock would be re-planted over this long-term monitoring period to ensure continued landscape function.

4.10.17 A Landscape Environmental Management Plan should be produced for the Proposed Scheme, to ensure the establishment and continued growth of new plant stock and to ensure that it meets the objectives.

4.11 Cumulative Assessment

4.11.1 This section assesses the potential effects of the Proposed Scheme in combination with the potential effects of planning application 22/0002/S36 (hereafter referred to as the “Other Development”), a proposed BESS with maximum installed capacity of 300 MW located south-west of the Proposed Scheme. Further information is detailed in Chapter 10 Combined and Cumulative Effects Assessment, of this EIAR.

Assessing cumulative landscape effects

4.11.2 Cumulative landscape effects may result from adding new types of change or from increasing or extending the effects of the main project.

4.11.3 This may result from changes in the content and character of the views experienced due to the introduction of new elements or the removal and damage to existing ones.

4.11.4 For example, the landscape effects of the Proposed Scheme, when taken on their own may be judged to be relatively low significant but when considered together with the effects of other schemes the effects may become more significant.

4.11.5 As the concern is with the accumulation of effects on the landscape character and the components that contribute to it, the study area has been defined by using the boundaries of the landscape character types, that the proposal sits within. This allows judgments about how the cumulative landscape effects of the Proposed Scheme and Other Development change the landscape character in this area.

Identifying the landscape effects and accessing their significance

4.11.6 The cumulative landscape effects (as with the landscape effects of the Proposed Scheme) are being considered in terms of the consequences for the key characteristics of the landscape in question. Judgements are made about the compatibility of the proposals being considered with the existing characteristics of the landscape.

4.11.7 To keep the task of accessing cumulative landscape effects to a reasonable and manageable scale, the approach to assessing the significance of cumulative effects is guided by the same principles as the approach to the assessment for the principal scheme. It considers:

- The susceptibility of the landscape receptor to the type of change under consideration.
- The value attached to the receptor under consideration, reflected in the particular designation status.
- The size and scale of the cumulative landscape effects identified.
- The extent of the geographical area covered by the cumulative effects.
- The duration of the cumulative effects.

4.11.8 The most significant cumulative effects are likely to be those that would give rise to changes in the landscape character of the study area of such an extent as to have major effects on the key characteristics and, in some cases, to transform it into a different landscape type.

Assessing cumulative visual effects

4.11.9 The description of the visual baseline is the same as for the visual effects assessment of the Proposed Scheme being considered. The relevant visual receptors and viewpoints have been identified and defined within the study area. These include:

- Consideration of the people affected at each location, and the activity that they are involved in.
- The extent, nature and characteristics of the views and visual amenity enjoyed by people within those viewpoints.
- Characteristics and even in some cases, to transform it into a different landscape type.

Identifying the visual effects and assessing their significance

4.11.10 The type of cumulative visual effect being accessed is the combined effect of two schemes (this is where the observer can see in this case the two developments from one point). The view is also accessed as in succession - where the observer has to turn his head to see the two developments, both actual and visual.

4.11.11 The cumulative assessment for each viewpoint will be assessed in the following manner:

- The susceptibility of the visual receptors that have been accessed to changes in views and visual amenity.
- The value attached to views they experience.
- The size and scale of the cumulative visual effects identified.
- The geographical extent of the cumulative visual effects identified.
- The duration of the cumulative visual effects, including the timescales relating to both the project being accessed and the other projects being considered, and the extent to which the cumulative effects may be considered reversible.

Viewpoint 1

4.11.12 This viewpoint is taken from the edge of Braeheadview farmyard on the far eastern boundary of the site. From this location the southern section of the Proposed Scheme will be visible, looking towards the substation.

4.11.13 Construction will be obvious to the farm and agricultural/substation workers. The residential building within the farm compound is screened by agricultural outbuildings. By Operation Year 15 the Proposed Scheme will be softened by the perimeter vegetation and the retained vegetation around the unnamed stream at the bottom of the slope. Potentially lighting infrastructure/lighting haze may be glimpsed through the maturing vegetation. However, this will be infrequent as the site is unmanned and lighting will only come on with the monthly check is carried out or when there is a security breach.

4.11.14 It may be possible to see the Other Development through the Proposed Scheme infrastructure but from this viewpoint it will be indirect. By Year 15 the proposed substantial screening to the western perimeter will screen the substation buildings.

Viewpoint 2

4.11.15 This viewpoint is taken from the junction of Treeswoodhead Road on the access road to Braeheadview Farm and Balgray Cottage.

4.11.16 There are a couple of elements that screen the development from this viewpoint. Bands of vegetation to the field boundary edge, the land slopes down to the unnamed stream at the southeastern end and the distance from the Proposed Scheme is 702m.In addition there is significant screening (proportion of mature evergreen trees) and bunding to the western perimeter of the substation. Only the coalescence of pylon lines hints at a developed hinterland.

4.11.17 In construction it may be possible to see cranes during construction and the additional construction traffic will have an adverse effect on the farm access track. However, by Operation Year 15 there will be no discernible change in view.

Viewpoint 3

4.11.18 This viewpoint is taken from Treeswoodhead Road south of Kilmarnock Substation. The distance from the Proposed Scheme is 580m.

4.11.19 The Other Development is located to the mid ground and underneath several key overhead lines. The Other Development is located in a localized dip in the valley which in conjunction with screening from the substation and topography would screen the majority of the Other Development infrastructure.

4.11.20 The Proposed Scheme can be seen to the east of the substation. Construction will be visible but transient. At operation Year 15 the Proposed Scheme will also be visible but from a distance and transient in nature. This is due to the elevated location of this viewpoint and the fact that the upper section of the development site is on elevated ground.

Viewpoint 4

4.11.21 This viewpoint is taken from the edge of Kilmarnock town from Treeswoodhead Road bridge over the A77 Kilmarnock Bypass. The distance from the Proposed Scheme is 1.45km.

4.11.22 Views of the Proposed Scheme will be barely perceptible from this location. The evergreen screening surrounds the substation and the Other Development to the west.

Viewpoint 5

4.11.23 This viewpoint is taken from urban fringe housing estate on the eastern outskirts of Kilmarnock. The distance from the Proposed Scheme is 1.9km.

4.11.24 The roof line of Braeheadview Farm can just be seen over the top of the field line. Construction works including cranes may be seen but will be barely perceptible within the wider view.

4.11.25 In Operation there will be no discernible change in view, due to distance and intermittent vegetation. The Other Development is well screened to the western boundary due to the dense planting around

the substation. A proportion of the planting mix is evergreen, therefore the site benefits from all year-round screening.

Viewpoint 6

4.11.26 This viewpoint is taken from the A46 trunk road. The distance from the Proposed Scheme is 1.12km.

4.11.27 The roofline of Braeheadview Farm can be seen over the crest of the hill. Views are limited by the vegetation belts to the field edge and around Cessnock Water. The Other Development benefits from the screen vegetation around the substation to the northern boundary and from being located within a localized dip.

4.11.28 Construction works would only be visible if there was high equipment such as cranes used for construction and even at that it would be barely perceptible due to distance and the transient nature of the viewers along the A47.

4.11.29 At Operation Year 15 there would be no change in view.

Viewpoint 7

4.11.30 This viewpoint is taken from the property edge of Dallars House. The distance from the Proposed Scheme is1.4km.

4.11.31 Low Dallars House Farm can be seen to the mid ground, with the substation behind, partially screened by the farm buildings. The Proposed Scheme is located to the high ground. Construction will be seen but it will be distant and barely perceptible.

4.11.32 Operation Year 15, while the vegetation will soften the infrastructure appearance of the Proposed Scheme. The Proposed Scheme will be visible and barely perceptible within the wider view, due to distance and intervening vegetation belts to the property, field edge and around Cressock Water.

Viewpoint 8

4.11.33 This viewpoint is taken from a farm track of Low Dallars Farm House. The distance from the Proposed Development is 735m.

4.11.34 The Proposed Scheme will be clearly seen on the horizon. The visualization has been created to visualize predicted planting heights at Year 15. This will soften the development infrastructure but will not screen it.

4.11.35 The Other Development is visible as there are no significant belts of vegetation between the farm and the buildings.

4.11.36 The cumulative impact amalgamation of these two sites will cause a degradation in views to the residents of Low Dallars Farm and its workers.

Construction Viewpoint 1

4.11.37 Viewpoint 1 has a direct view of the Proposed Scheme and would experience views during the other development. Residual effects on Viewpoint 1 during construction from the Proposed Scheme are assessed as Major Adverse (Significant). The Other Development reported visual receptors during construction would be exposed to low level effects. It is considered the cumulative effects on Viewpoint 1 are **Moderate Adverse (Significant).**

4.11.38 Viewpoint 2 will only have views of the development in construction and the Other Development is well screened to the east with established evergreen vegetation belt. Residual effects on Viewpoint 2 during construction from the Proposed Scheme are assessed as Moderate Adverse (Significant). The Other Development reported visual receptors during construction would be exposed to low level effects. It is considered the cumulative effects on Viewpoint 2 are **Moderate Adverse (Significant).**

Viewpoints 3

4.11.39 Residual effects on Viewpoint 3 during construction from the Proposed Scheme are assessed as Minor Adverse (Significant). The Other Development reported visual receptors during construction

would be exposed to low level effects. It is considered the cumulative effects on Viewpoint 3 are **Slight Adverse (Not Significant).**

Viewpoints 4, 5 and 6

4.11.40 Viewpoints 4,5 and 6 views will be barely perceptible from this distance both in construction and operation. As reported in Chapter 10 Combined and Cumulative Effects Assessment, it is not considered possible for cumulative effects to accumulate to result in a significant cumulative effect overall should a negligible effect be reported. This is because negligible effects are, by definition, barely perceptible, and it is considered extremely unlikely that they could accumulate to the extent that a significant cumulative effect would result. Therefore, a cumulative effects assessment on Viewpoint 4, 5 and 6 was not undertaken.

Viewpoint 7

4.11.41 Viewpoint 7 is one of the most sensitive receptors. Residual effects on Viewpoint 7 during construction from the Proposed Scheme are assessed as Moderate Adverse (Significant). The Other Development reported visual receptors during construction would be exposed to low level effects. It is considered the cumulative effects on Viewpoint 7 are **Moderate Adverse (Significant).**

Viewpoint 8

4.11.42 Viewpoint 8 is also considered a sensitive receptor. Residual effects on Viewpoint 8 during construction from the Proposed Scheme are assessed as Major Adverse (Significant). The Other Development reported visual receptors during construction would be exposed to low level effects. It is considered the cumulative effects on Viewpoint 8 are **Moderate Adverse (Significant).**

Operation

Viewpoints 1 and 2

4.11.43 It is considered, following the maturing of mitigation vegetation proposed by both the Proposed Scheme and Other Development, during operation Viewpoints 1 and 2 will not have views towards the Other Development. Therefore, a cumulative effects assessment on Viewpoint 1 and Viewpoint 2 was not undertaken.

Viewpoints 3, 4, 5 and 6

4.11.44 The Proposed Scheme is considered to have Negligible visual effects on Viewpoints 3,4,5 and 6. As reported in Chapter 10 Combined and Cumulative Effects Assessment, it is not considered possible for cumulative effects to accumulate to result in a significant cumulative effect overall should a negligible effect be reported. This is because negligible effects are, by definition, barely perceptible, and it is considered extremely unlikely that they could accumulate to the extent that a significant cumulative effect would result. Therefore, a cumulative effects assessment on Viewpoint 4, 5 and 6 was not undertaken.

Viewpoint 7

4.11.45 Viewpoint 7 is one of the most sensitive receptors. Both the Other Development and the Proposed Scheme will remain visible at Year 15. The receptors benefit from the fact that the majority of Dallars House is screened by a mature buffer/woodland, it is also at a distance with intermittent screen vegetation. There is only a slight loss to the key features and elements that make up this view. Residual effects on Viewpoint 7 during operation from the Proposed Scheme are assessed as Minor Adverse (Not Significant). The Other Development reported visual receptors during operation would be exposed to low level effects. It is considered the cumulative effects of Viewpoint 7 are **Slight adverse (Not Significant).**

Viewpoint 8

4.11.46 Viewpoint 8 will see the Proposed Scheme and the Other Development at Year 15, although there is a land buffer between the two sites. This will be densely planted with woodland style planting in keeping with the surrounding landscape and will prevent the coalescence of the two BESS developments.

Residual effects on Viewpoint 8 during operation from the Proposed Scheme are assessed as Moderate Adverse (Significant). The Other Development reported visual receptors during operation would be exposed to low level effects. It is considered the cumulative effects of Viewpoint 8 are **Slight adverse (Not Significant).**

Summary of effects on the appearance of the area

4.11.47 The analysis of the effect's individual representative viewpoints and the analysis of journeys through the settlement leads to a number of conclusions.

4.11.48 Most of the receptors will only see either the Proposed Scheme or the Other Development at a distance. Parts of the developments will be visible and experienced by receptors, though this is mainly over short sections around the developments. The two schemes are mostly experienced on their own, and any effects are localised to the sector of the settlement in which each are located. At these locations, the lengths of new development are modest. No significant effect on the overall character and appearance of the settlement experienced from these viewpoints is predicted. These sites will largely be experienced as single larger sites and no significant effects on character or appearance would arise from the Proposed Scheme and Other Development individually or cumulatively would not materially affect important views towards or out of the settlement. The cumulative effects are considered **Neutral (Not Significant).**

Summary of landscape character

4.11.49 During construction the Proposed Scheme assessed effects upon landscape character as Minor adverse (Not Significant). The Other Development considers effects upon landscape character as Minor adverse It is considered the cumulative effects of on landscape character is **Slight adverse (Not Significant).**

4.11.50 During operation, the Other Development considers effects upon landscape character as Negligible. As reported in Chapter 10 Combined and Cumulative Effects Assessment, it is not considered possible for cumulative effects to accumulate to result in a significant cumulative effect overall should a negligible effect be reported. This is because negligible effects are, by definition, barely perceptible, and it is considered extremely unlikely that they could accumulate to the extent that a significant cumulative effect would result. Therefore, a cumulative effects assessment on Viewpoint 4, 5 and 6 was not undertaken.

4.12 References

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