

# FIELD SPITTAL BATTERY ENERGY STORAGE SYSTEM

Landscape and Visual Appraisal

Field Spittal Ltd

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www.stephenson-halliday.com



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### **Document history**

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### 1.1 Summary

- 1.1.1 Stephenson Halliday was commissioned in July 2024 to prepare a Landscape and Visual Appraisal (LVA) for the proposed construction and operation of a 300 MW Battery Energy Storage System (BESS) and associated infrastructure, access and ancillary works (the Proposed Development) on behalf of Field Spittal Ltd ('Field').
- 1.1.2 The Proposed Development comprises of battery compound, substation compound, and associated infrastructure including underground grid connection cable, interface substation, site access, parking, sustainable urban drainage (SUDS) and landscape and biodiversity proposals. The Proposed Development would have an operational life of 30 years, after which the site would be restored to its former use.
- 1.1.3 Effects on landscape character arising from the completed development would affect only the host landscape character area. Initially Minor adverse effects on character of the Farmed Lowland Plain Landscape Character Type (LCT 143) would be restricted to the site and immediate surroundings with effects reducing to Minor/Negligible adverse effects at year 10 of operation. During the 24 month construction period, effects would arise within the field where the Proposed Development would be situated and the immediate extents within 1 km. Effects beyond this LCT would be Negligible.
- 1.1.4 Visual effects would occur within a short distance of the Proposed Development on a limited number of receptor groups. Potential visibility would be restricted by localised landform, Spittal Converter Station and pockets of forestry to the west. The Proposed Development would largely be contained at a lower elevation compared with the surrounding landscape, with two earth bunds that would screen views of most of the BESS infrastructure from a very short section of the A9. Once established, landscape mitigation comprised of native grassland and a native hedgerow would help to integrate the appearance of the earth screening bunds into views from the A9. Intervisibility from the wider area would be restricted by topography and vegetation with visual effects reducing markedly with increasing distance beyond 1 km.
- 1.1.5 Cumulative landscape effects would be limited to the host LCT and would be Minor Adverse. There are several energy generation and transmission projects which are operational and proposed within this LCT, all concentrated within a linear corridor between existing overhead lines, Spittal Converter Station and the A9. The addition of the Proposed Development would result in a slight increase in the influence of such infrastructure within a localised area of the Farmed Lowland Plain LCT.
- 1.1.6 Cumulative visual effects would be limited to the Spittal Hill and Achanarras Hill receptor groups and the A9. The addition of the Proposed Development would be perceptible but in combination with proposed cumulative schemes, the level of effect would range from Moderate/Minor to Minor Adverse. A limited number of proposed cumulative schemes would be visible in sequential views along a short section the A9 and the addition of the Proposed Development would result in Moderate/Minor Adverse cumulative effects on this key route due to the increased influence of energy infrastructure clustered within a linear corridor. A full summary of effects is provided in Table 7.3.



## 2 INTRODUCTION

### 2.1 Background

- 2.1.1 Stephenson Halliday was commissioned in July 2024 to prepare a landscape and visual appraisal (LVA) of the proposed construction and operation of a battery energy storage system (BESS) with a capacity of up to 300 megawatts (MW) and associated infrastructure, access and ancillary works (the Proposed Development) on behalf of Field Spittal Ltd. This assessment forms part of a suite of documents supporting the application for the Proposed Development.
- 2.1.2 This LVA defines the existing landscape and visual baseline environments; assesses their sensitivity to change; describes the key landscape and visual related aspects of the Proposed Development; and, describes the nature of the anticipated changes and assesses the effects arising during construction, operation and decommissioning.
- 2.1.3 The LVA considers the potential effects upon:
  - landscape fabric;
  - landscape character;
  - the special qualities of any landscape designations; and
  - visual receptors including residential, transport and recreational receptors.
- 2.1.4 The LVA has been undertaken in accordance with published best practice; namely the Guidelines for Landscape and Visual Impact Assessment (Third Edition), Landscape Institute and IEMA 2013 (GLVIA3) and associated technical guidance notes published by the Landscape Institute (referenced as appropriate in Appendix 1).
- 2.1.5 Although linked, landscape and visual effects are considered separately. Landscape effects derive from changes in the landscape fabric, which may result in changes to the character, whereas visual effects are the effect of these changes as experienced by people (visual receptors). Effects on the setting of any heritage assets are dealt with as part of a separate Archaeological Desk-based Assessment submitted as part of the application.

### 2.2 The Site and Proposals

- 2.2.1 Figure 1 shows the Proposed Development within its local landscape context and full details of the Proposed Development are contained in the Planning Statement. The site comprises an agricultural field which slopes gradually from (113 m AOD) south-east to (76 m AOD) northwest. The Proposed Development principally comprises a battery energy storage system (BESS) with a capacity of up to 300 megawatts (MW) which will charge and discharge electricity from the adjacent Spittal 275 kV substation (Spittal Converter Station). The Proposed Development would have a total development footprint of approximately 9.51 ha across the 48.58 ha planning boundary.
- 2.2.2 The Proposed Development includes a new approximately 300-metre-long access track between the A9 and the site. The new access point at the A9 includes gated access, bell



mouth and a 20 m hard standing set back from the edge of the carriageway. The new access road connects to the existing farm track, which will be upgraded up to the points of entry into the BESS and substation compounds to ensure it is capable of accommodating all required construction and emergency vehicles.

### 2.3 Competence

- 2.3.1 This report along with the design and mitigation of the Proposed Development has been prepared by Chartered Landscape Architects at Stephenson Halliday.
- 2.3.2 The Practice is a Landscape Institute and IEMA registered practice and all work is prepared and reviewed internally by senior highly experienced landscape planners with Public Inquiry experience.
- 2.3.3 To inform the assessment, a site visit was made by the Stephenson Halliday assessment team during August 2024 to various locations within the study area including, but not restricted to, representative viewpoints.

### 2.4 Stakeholder Consultation

2.4.1 The Highland Council (THC) was consulted in relation to: the scope of the assessment; the selection of viewpoints; the methodology; and the extent of the LVIA study area discussed in the pre-application advice issued on 12<sup>th</sup> June 2024 (Reference number: 24/00187/PREMAJ) and via email with the THC Landscape Officer on 8<sup>th</sup> August 2024. There was no response to the email sent on 8<sup>th</sup> August 2024 setting out the confirmation of approach to LVA, viewpoints, visualisations and cumulative assessment, however, the approach takes into account all issues raise in the pre-application advice and previous experience of similar projects. The key responses are detailed below in Table 2.1: Summary of Stakeholder Consultation.

Consultee	Issue	How this is addressed
The Highland Council Pre-application Advice (24/00187/PREMAJ) June 2024	Bunding/ screening earthworks: Whilst bunding is proposed in order to reduce visual impacts of the development, it will be challenging to 'naturalise' its appearance. Permanent screening earthworks will only be acceptable if the earthworks themselves can be designed to fit in with the landscape character of the area. Bunds with constant depth, height and slope are unlikely to achieve this, so detailed design to ensure that earthworks do not read as an obvious landform intervention will be required. Furthermore, successful establishment of tree and shrub planting can be challenging in the Caithness area particularly on made ground, you are advised to ensure that species selection, planting method, and establishment maintenance is tailored to the locality.	Proposed earthworks and earth bunds have been refined through an iterative process of testing and modelling of visualisations from key views along the A9. A balance has been sought between engineering constraints, cultural heritage, landscape and visual matters. Landscape mitigation is described in full in Section 6.2. In summary, a combination of proposed earthwork profiles, native Highland grass seeding and replacement hedgerows have been designed to fit the local landscape context.
	Proposed access: There are additional landscape and visual impact	The LVA considers the potential effects on the landscape fabric and local character.
	concerns about the proposal to upgrade a site access off the A9(T). This is because having a	

#### Table 2.1 Summary of Stakeholder Consultation



widened access along with any site signage at the junction is likely to draw attention to the industrial development and contribute to erosion of the area's rural qualities and its association with agriculture, and its replacement with industrial energy development. It would be preferable to reach agreement to use the existing access into the existing converter station and the prospective developer is strongly advised to pursue further discussions on that.	The proposed access track runs parallel to the existing Caithness stone field boundary to reduce the impression of change to the landscape pattern. No signage is proposed along the track. The potential use of the existing access road into the Spittal Converter Station was explored, however this was refused by SSE.
Visualisations: "Visualisations provided are expected to accord with the Council's latest Visualisation Standards for Wind Energy Developments. While this guidance was drawn up with specific reference to wind energy projects, aspects will still be relevant for other proposals. The visualisations should include the scheme at completion and following 10 years of landscaping establishment.	The visualisations presented in Appendix 5 take account of the Visualisation Standards for Wind Energy Developments (2016 The Highland Council). Visualisations are presented at year 1 and year 10 of operation.
Viewpoint locations: "The suggested viewpoint locations appear appropriate but the scale of mapping and lack of ZTV information mean a more definitive response cannot be given at this stage. A ZTV of the development with the proposed viewpoints should be shared with the Council for further consideration."	Six proposed viewpoints, representative of visual receptors within the study area included within the LVA, are based on a combination of site survey, bare earth and screening ZTVs.
Cumulative assessment: "The Council is aware that there is a lot of BESS interest in the surrounding area and as such your landscape and visual impact assessment must include an up-to-date assessment of the cumulative effects of the proposal with other similar proposals in the wider area covering an appropriate study area."	Relevant energy related cumulative developments within the study area have been included within the LVA and listed in Section 7.6.

#### 2.5 **Study Area**

2.5.1 It is accepted practice in landscape and visual assessment that the extent of the study area for a development proposal is broadly defined by its visual envelope. In this case a study area of 3 km has been used (as shown by Figure 1). This study area is adequate to identify all non-negligible effects on landscape and visual receptors given the generally low elevation of the site, low height of the majority of the Proposed Development components and the presence of existing forestry within the immediate vicinity of the site.

#### **Report Structure and Terminology** 2.6

2.6.1 This report is structured as set out in the table of contents. Supporting appendices have been prepared that supplement the sections regarding methodology and baseline. The appendices are important to the assessment and should be read alongside this report.



2.6.2 Key terms used within the assessment are described in Section 3 and Appendix 1 which set out the methodology. A glossary is provided within Appendix 1.

## 3 METHODOLOGY

- 3.1.1 This section provides a summary of the methodology adopted for the LVA. Full details of the assessment methodology, including assessment criteria, are provided in Appendix 1.
- 3.1.2 In accordance with GLVIA3, the level of landscape and visual effects is determined by considering, in tandem, the sensitivity of landscape and visual receptors (landscape elements, landscape character areas, landscape designations and groups of people who may be affected by changes in visual amenity) and the magnitude of effect arising from the Proposed Development.

### 3.2 Cumulative Assessment

3.2.1 Cumulative assessment relates to the assessment of the effects of more than one development. The approach to cumulative assessment is set out within Appendix 1.

### 3.3 Distances

3.3.1 Where distances are given in the assessment, these are approximate distances between the nearest part of the site and the nearest part of the receptor in question, unless explicitly stated otherwise.

### 3.4 Visual Aids

3.4.1 The method of visualisation selected has been informed by '*Visualisation Standards for Wind Energy Developments*' (The Highland Council 2016). The Visuals method is set out in Appendix 2. Photographs of the existing views and photomontages showing the Proposed Development are in Appendix 5.

## 4 PLANNING POLICY

### 4.1 National Planning Policy

- 4.1.1 National Planning Framework (NPF) 4 (published February 2023) sets out land use policy guidance in relation to development in Scotland and plans for infrastructure investment. This requires inter alia effective protection of the environment and use of natural and cultural assets, including the importance of landscapes to Scotland's identity.
- 4.1.2 In developing new projects, Policy 11 recognises the distinctive landscapes and the need for project design and mitigation to demonstrate how significant impacts are addressed including:
- 4.1.3 "...significant landscape and visual impacts, recognising that such are to be expected for some forms of renewable energy. Where impacts are localised and/ or appropriate design mitigation has been applied, they will generally be considered to be acceptable" (NPF4, Policy 11- Section e, ii).



## 4.2 Local Planning Policy

- 4.2.1 The Highland-wide Local Development Plan was adopted in 2012 and sets out the spatial planning policies relating to development and land-use within The Highland Council. The current local planning policies are relevant to the site and landscape and visual matters:
  - Policy 61 Landscape: Outlines that landscape and scenic value are of very high importance within and out with designated areas. It states that:

"New developments should be designed to reflect the landscape characteristics and special qualities identified in the Landscape Character Assessment of the area in which they are proposed. This will include consideration of the appropriate scale, form, pattern and construction materials, as well as the potential cumulative effect of developments where this may be an issue. The Council would wish to encourage those undertaking development to include measures to enhance the landscape characteristics of the area. This will apply particularly where the condition of the landscape characteristics has deteriorated to such an extent that there has been a loss of landscape quality or distinctive sense of place. In the assessment of new developments, the Council will take account of Landscape Character Assessments, Landscape Capacity Studies and its supplementary guidance on Siting and Design and Sustainable Design, together with any other relevant design guidance."

### 4.3 Local Guidance

4.3.1 In addition to the policy documents identified above, the Caithness and Sutherland Local Development Plan (CaSPLan) was adopted in 2018. The Caithness and Sutherland are characterised by a unique landscape and coastal setting. The CaSPlan seeks to ensure key designated landscape features are not severed and distinct landscapes are preserved. The CaSPlan also includes details about the revision of boundaries to special landscape areas within Caithness and Sutherland. The site and the immediate context are not subject to landscape designation.

## 5 BASELINE

### 5.1 Introduction

- 5.1.1 An overview of the baseline study results is provided in this section with the full baseline description of the individual landscape and visual receptors being provided alongside the assessment in Section 7 for ease of reference.
- 5.1.2 This section provides a review of the key local baseline studies and guidance documents and identifies those landscape and visual receptors which merit detailed consideration in the assessment of effects, and those which are not taken forward for further assessment as effects "have been judged unlikely to occur or so insignificant that it is not essential to consider them further" (GLVIA3, para. 3.19).
- 5.1.3 Both this baseline section and the effects section describe landscape character and visual receptors before considering designated areas as it is common for designations to



encompass both character and visual considerations within their special qualities or purposes of designation.

### 5.2 Local Guidance and Baseline Studies

- 5.2.1 The following guidance documents have been used to inform this appraisal:
  - Scottish Natural Heritage (2019) Scottish Landscape Character Types Maps and Descriptions; and
  - The Highland Council (2011) Assessment of Highland Special Landscape Areas; which contains maps and citations for the Special Landscape Areas (SLAs) within the Highland Council area.

### 5.3 Zone of Theoretical Visibility Study

- 5.3.1 A Zone of Theoretical Visibility (ZTV) study was generated based on the design of the Proposed Development. This is shown on Figure 2 and Figure 3 and indicates areas of potential visibility. The analysis was carried out using a topographic model and includes height estimates applied to forestry and buildings as visual barriers in order to provide a more realistic indication of potential visibility.
- 5.3.2 The ZTV study was used to aid the identification of those receptors that are likely to be most affected by the Proposed Development and those that do not require detailed consideration. It is noted that views from some areas shown as having potential visibility of the Proposed Development may be screened by taller forestry or localised landscape elements such as boundary walls and hedgerows.
- 5.3.3 The bare earth ZTV (Figure 2) illustrates that potential visibility is limited within the study area to a localised context of the site within 1km and a band through low level agricultural fields, open moss and rough pasture from Halkirk in the north to Mybster to the south. Theoretical visibility also includes a very short section of the A9 and the west facing slope of Spittal Hill.
- 5.3.4 The screening ZTV (Figure 3) illustrates the screening effects of medium scale blocks of forestry to the northeast, south and west of the site. A linear band of trees north of the Spittal Converter Station would also limit potential visibility to the north. Taking this into account, visibility is limited to the open fields and short section of the A9 within 1 km of the site. An outer wedge of visibility extends between 2-3 km northwest at Yellow Moss and Moss of Halkirk between Harpsdale and Halkirk. Given the pattern of visibility shown by the ZTV, a 3 km study area is sufficient to consider landscape and visual effects.

### 5.4 Landscape Character

5.4.1 Figure 4 indicates that the site coincides with Landscape Character Type (LCT) 143 Farmed Lowland Plain. This landscape is characterised by a broad low-lying agricultural plain bounded by expansive moorlands. LCT 134 Sweeping Moorland and Flows occupies the southern part of the study area from where there would be very limited potential visibility and therefore only LCT 143 Farmed Lowland Plain is considered further.



## 5.5 Visual Receptors

- 5.5.1 Visual receptors are "*the different groups of people who may experience views of the development*" (GLVIA, 3rd edition, para 6.3). In order to identify those groups who may be significantly affected within the ZTV study, baseline desk study and site visits have been used.
- 5.5.2 The different types of groups assessed within this report include local residents; people using key routes such as roads; cycle ways, people within accessible or recreational landscapes; people using Public Rights of Way; or people visiting key viewpoints. In dealing with areas of settlement, Public Rights of Way and local roads, receptors are grouped into areas where effects might be expected to be broadly similar, or areas which share particular factors in common. Representative viewpoints have been selected to aid the assessment of effects on visual receptors.

### **Baseline Visual Environment**

- 5.5.3 As shown on Figure 1, the site is located approximately 1.6 km northwest of Spittal. Spittal is the nearest residential settlement along the A9. Local landform and blocks of commercial forestry restrict views towards the site.
- 5.5.4 Uninterrupted views towards the site can be gained from the western slopes of Spittal Hill approximately 0.7 km east. However, views towards the site from the summit of this hill are restricted by localised landform.
- 5.5.5 Blocks of forestry at Achlachan Moss occupy a wedge of land within the western part of the study area which limits potential visibility to the west. Achanarras Hill is the site of a former quarry now designated as a Site of Special Scientific Interest (SSSI) and Nature Reserve. Access to the hill via a core path leads to an elevated area with information boards and is a locally known place of interest with uninterrupted panoramic views across sweeping moorland and flows to the south set against a background of rugged mountains. However, views towards the site from this location are partially filtered by intervening forestry.
- 5.5.6 The existing 275 kV overhead line and dual 132 kV overhead lines are a noticeable electrical infrastructure features that runs through the landscape connecting to the Spittal Converter Station and west of the A9. There are distant views of rotating wind turbines from more elevated locations.

### **Visual Receptor Groups**

- 5.5.7 The following visual receptor groups are located within the study area and are likely to experience visibility of the Proposed Development, as shown on the ZTV study on Figure 2 and Figure 3 and are considered further in Section 6:
  - Spittal Hill (0.7 km east);
  - Achanarras Hill (0.7 km southwest); and
  - Harpsdale Area (2.9 km northwest).



5.5.8 Other visual receptors, including settlement of Spittal and other dispersed residential areas would not experience visibility of the Proposed Development and are not considered for further assessment.

### **Key Routes**

5.5.9 As shown on Figure 1, the A9 (350 m west) is the only key route within the study area with potential visibility of the site. The A9 is the key transport route and borders the application site boundary.

### 5.6 Landscape Designations

5.6.1 The site is not located within any landscape designations. Special Landscape Area (SLA) 06-The Flow Country and Berridale Coast is located approximately 8 km south of the site and beyond the study area. Considering the distance and immediate surrounding context to the site of commercial forestry and the large scale of the landscape there would be no change to the special qualities or key characteristics associated with this SLA 06 and it is not considered further.

## 6 THE PROPOSED DEVELOPMENT

### 6.1 The Proposals

- 6.1.1 The Proposed Development is described in detail in the Planning Statement submitted with this application. The Proposed Development principally comprises a battery energy storage system (BESS) with a capacity of up to 300 megawatts (MW) which will charge and discharge electricity from the adjacent Spittal 275 kV substation. It includes:
  - Battery storage units arranged into rows;
  - Medium-voltage (MV) skids and ancillary low-voltage (LV) equipment;
  - High-voltage (HV) grid transformers;
  - Air insulated switchgear;
  - A substation building comprising welfare facilities, a switch room and control room;
  - An underground 275 kV grid connection cable; and
  - Site-wide supporting infrastructure including cabling, access tracks, fencing, attenuation basins, and landscaping measures.
- 6.1.2 Whilst the exact specifications are subject to detailed design, the principal components described form the basis of the planning application and provide sufficient information to allow environmental assessments and mitigation to be appropriately scoped.
- 6.1.3 The Proposed Development would have an operational life of 30 years, after which the site would be restored to its former use.



## 6.2 Design Approach and Mitigation

- 6.2.1 The design approach is described in full within the submitted Planning Statement and drawings accompanying the application. This section of the appraisal considers how the Proposed Development aligns with guidance provided in respect of visual impact and landscape character; and measures specifically included within the design to mitigate landscape and visual effects.
- 6.2.2 The substation compound has been located closest to the existing Spittal Converter Station on a generally flat area, with the site compound cut into the existing topography, further reducing the overall height of the Proposed Development and visibility from the A9.
- 6.2.3 The principal embedded landscape and visual mitigation has been the manipulation of existing landform including the lowering of the finished floor level and the addition of two earth screening bunds to minimise the views of new infrastructure. Two earth screening bunds are proposed along the site's southern and eastern boundaries. The bunds help to screen the Proposed Development from visual receptors and have been designed to align with the existing topography of the surrounding landscape. The design of the earth bunds takes account local landform and patterns, with the sinuous outer slopes designed to integrate the earthworks into the landscape whilst aiding landscape assimilation and screening of the proposed infrastructure. The bunds will be constructed from excess soil and sub-soil produced from cut and fill works within the site.
- 6.2.4 Landscape proposals illustrated on Figure 5 comprise of earthworks, grassland seeding and some limited planting of hedgerow. This has been developed to aid landscape integration within the surrounding context and minimise the appearance of the BESS and substation compounds. Landscape proposals also contribute to biodiversity enhancements across the site. The approach to mitigation takes into account the landscape setting of the St Magnus' Church, burial ground and hospital Scheduled Monument approximately 100 m to the southeast (considered in detail in the Archaeological Desk-based Assessment).
- 6.2.5 The proposed landscape mitigation plan is based on a transition from pastoral grassland to native highland grassland mix seeded across most of the landscaped area within the application site. The proposed native Highland grassland would cover the area at existing ground level and the slopes of the proposed earth screening bunds to aid visual integration within the landscape. The native Highland grassland would create a varied texture and mosaic similar to the wider landscape pattern and would help soften the appearance of the screening bunds. A proposed native hedgerow would delineate the boundary between the site and the pastoral field to the east such that the transition in appearance is similar to the local landscape pattern. The proposed attenuation basin would be seeded with an appropriate wet meadow grassland mix. Any temporary compounds and laydown areas would be restored to their pre-construction existing condition.

### 6.3 Construction

- 6.3.1 The construction phase is estimated to take up to two years and would involve the following key activities:
  - Site preparation and establishment activities, including vegetation removal and the erection of temporary fencing;



- Construction of the new access road and junction onto the A9;
- Earthworks and establishment of site compound;
- Construction of equipment platforms and foundations, including underground ducting and cabling;
- Delivery and arrangement of equipment;
- Cabling and connection works between battery equipment, ancillary equipment and substation compound;
- Installation of underground cabling between substation compound and Spittal substation;
- Testing and commissioning; and
- Landscape planting, earthworks and site restoration.
- 6.3.2 The final construction sequencing and programme will be determined subject to detailed design following the appointment of a suitable construction contractor. Landscape works and site restoration would be programmed and carried out as early as possible following construction to ensure landscape planting is given suitable time to establish, and any disturbed areas are returned to their pre-development condition.
- 6.3.3 The majority of construction traffic would be limited to the initial 12 months of the construction period during the civils stage and equipment deliveries. The final 12 months would involve electrical works and commissioning.

## 7 LANDSCAPE AND VISUAL EFFECTS

### 7.1 Introduction

- 7.1.1 This section sets out the effects that the Proposed Development would have on the landscape and visual receptors.
- 7.1.2 Construction effects would be short term over a period of approximately 24 months, involving the removal of pockets of hedgerow along the access track, movement of vehicles, localised excavations and the installation of the project components. Effects on landscape character and views during construction and decommissioning would be similar, Small in scale and Adverse.
- 7.1.3 Operational effects are assessed during Year 1 when construction is complete but before mitigation planting is fully established. In time, the scale of change would very gradually reduce as planting along site boundaries matures. During the early part of this period effects are likely to be at their greatest. Operational effects at Year 10 are also considered where relevant.
- 7.1.4 Construction and decommissioning effects are not separately identified except where likely to be notably different from effects during operation.



### 7.2 Effects on Site Fabric

- 7.2.1 Construction of the Proposed Development would result in the loss of agricultural land and limited sections of hedgerow. Hedgerow removals would include a 245 m section of the existing eastern hedgerow and a 43 m section of northern hedgerow at the proposed access point into the BESS compound and the adjacent cable route.
- 7.2.2 No trees would be removed during the construction or operational phases. At the BESS compound and substation compound, the effects on the landscape fabric would primarily result from the loss of agricultural fields and hedgerow. Construction and operational site traffic would require the upgrade of an existing access track and access to the main BESS site. The proposed earthworks and final levels would consist of developing a predominantly level area across the main BESS compound below the existing ground level together with two earth screening bunds to the east and south. These bunds are part of the embedded mitigation measures to mitigate potential effects on visual amenity, heritage assets (considered in detail in the Cultural Heritage and Archaeology Assessment) and to aid landscape integration.
- 7.2.3 The proposed landscape mitigation set out in Section 6.2 would comprise transition from pastoral grassland to native highland grassland mix across most of the landscape areas within the application site defined by a replacement mixed native hedgerow. The proposed grassland would cover the area at existing ground level and the slopes of the proposed screening bunds. The proposed native hedgerow would delineate the boundary between the site and the pastoral field to the east such that the transition would be similar in appearance to the local pattern of the landscape.

### 7.3 Viewpoint Analysis

- 7.3.1 Viewpoint analysis has been undertaken from a total of six viewpoints. The viewpoint locations are illustrated on Figures 1 to 4. The visualisations are contained in Appendix 5 and comprise:
  - Detailed Location Map;
  - Photomontage panorama at 65.5 ° at year 1 of operation;
  - Photomontage panorama at 65.5 ° at year 10 of operation (where relevant); and
  - Baseline panoramas and wirelines.
- 7.3.2 The full viewpoint analysis is contained within Appendix 3: Viewpoint Analysis. The findings are summarised in Table 7.1.
- 7.3.3 Appendix 3 Viewpoint Analysis considers the nature and the scale of changes to character and views at each viewpoint location only. The sensitivity of receptors and wider extent of the effect (beyond the individual viewpoint location) and its duration are considered in the main body of the assessment text below, as part of the consideration of the magnitude and level of effects.



Viewpoint no.	Name	Distance/ direction	Scale of visual effect (at year 1 of operation)	Scale of landscape effect (at year 1 of operation)
1	A9, North	0.4 km, E	Medium/Small	Small
2	A9, South	0.7 km, SE	Medium/Small	Small
3	Approach to Spittal Hill	1.1 km, E	Medium/Small	Small
4	Achanarras Hill Quarry Car Park	1.4 km, S	Negligible	Negligible
5	Achanarras Hill Quarry	0.7 km, SE	Small	Small/Negligible
6	Bridge Street, Yellow Moss	3.0 km, NW	Negligible	Negligible

#### Table 1.1 Viewpoint analysis summary

### 7.4 Effects on Landscape Character

#### LCT 143 Farmed Lowland Plain

- 7.4.1 A description of LCT 143 is briefly summarised below, along with further observations from site-based work. This LCT forms a broad low-lying plain bounded by the sea and the expansive sweeping moorland and flows landscape.
- 7.4.2 Key characteristics:
  - "A generally open, low-lying plain, gently undulating to form shallow broad valleys, which are often filled with lochs and mosses, and subtle low ridges.
  - Occasional smooth hills rise above the more low-lying plain forming local landmarks.
  - The broad and shallow valley of the River Wick forming the largest of a series of valleys generally aligned south-east/north-west across the plain.
  - Agriculture the predominant land cover.
  - More intensively managed farmland near the coast around Thurso and Wick, and close to Loch Watten.
  - Distinctive Caithness flagstone fences in some parts, creating low, sharp edges to fields.
  - Sparse woodland, mainly comprising small angular coniferous plantations planted for shelter on farms.
  - Larger conifer woodlands located at the transition with the Sweeping Moorland and Flows standing out where they are planted on poorer wetter ground on low ridges.
  - Farm buildings and houses forming focal points within the landscape.



- Occasional loose clusters of croft houses located on more marginal upper slopes and near the coast.
- A number of historic environment features, including conspicuous castles, Baronial mansions and tall 'Lairds' houses, usually with broadleaf shelter woods planted around them.
- Roads reinforce the settlement pattern, often following the field and property boundaries, running straight and then swinging around sharp corners.
- A number of large settlements, including the towns of Thurso and Wick, situated on the coast, as well as several smaller settlements.
- Many historic features, including brochs and cairns, dotted across farmland and situated on hills within, or adjacent to, this area.
- Small groups of large wind turbines sited on some of the low ridges and hills and prominent visibility of larger wind farms in adjacent Landscape Character Types.
- Extensive views due to the openness of the landscape, and the clarity of northern air and light.
- Dramatic views from the northern part of this landscape to Dunnet Head and the distant Orkney islands, and views from the A9 on the western edge of this landscape of the Lone Mountains of Movern and Scaraben seen across the low-lying Sweeping Moorland and Flows"
- 7.4.3 As set out in Appendix 4, LCT 143 is judged to be of Low sensitivity. Achanarras Hill Quarry SSSI and Nature Reserve is of geological, ecological and local recreational interest. There are two Scheduled Monuments in close proximity southeast of the site. Together these natural and cultural heritage aspects indicate a very localised area of higher value. The A9 is a key route and provides access to recreational resources within the wider landscape beyond the study area. Landscape value is judged to be Community. The susceptibility of LCT 143 to change from the Proposed Development is assessed as Medium/Low. Medium-scale agricultural fields and blocks of commercial forestry are more tolerant of change. A very small part of the LCT would be physically affected by the Proposed Development and would increase the influence and views of energy infrastructure along the existing 132 kV overhead line (OHL) corridor that runs through the middle of this LCT.
- 7.4.4 Construction activities including the movement of plant, earthworks within the site, vegetation clearance and the construction of site infrastructure would result in a noticeable increase in uncharacteristic activity between the immediate context of the site and within 1 km from the site boundary. Forestry to the west and rising landform to the east at Spittal Hill would limit the impression of change within the landscape. The scale of change would be Small across a Limited extent of this LCT. This Short-term change would give rise to a Slight magnitude resulting in a **Minor Adverse** effect during construction.
- 7.4.5 At year 1 of operation, the Proposed Development would result in direct effects on the landscape fabric of LCT 143. The introduction of the proposed battery units, substation and associated infrastructure would result in a slight increase in the presence of energy infrastructure within a localised low-level area adjacent to the existing Spittal Converter



Station and the immediate context of the double 132 kV OHL corridor. There would be some loss of agricultural land due to the introduction of the BESS compound, substation compound, access track and two earth screening bunds. The degree of enclosure due to forestry immediately west of the Proposed Development combined with the reduced ground level and earth screening bunds would result in a Small scale of change. There would be barely perceptible changes to the other key characteristics. The geographical extent is assessed as Limited over the Medium-term. This would give rise to a Slight magnitude of effect resulting in a **Minor Adverse** effect at year 1 of operation.

7.4.6 At year 10 of operation, established landscape mitigation would aid landscape integration. Once established, proposed native highland grassland would reduce the initial impression of the earth screening bunds within the local landscape. The established earth screening bunds would screen the same extent of electrical infrastructure as assessed at year 1. The scale of change would be Small/Negligible over a Limited extent of this LCT. Over the Long-term this would give rise to a Slight/Negligible magnitude resulting in a **Minor/Negligible Adverse** effect.

### 7.5 Visual Effects

- 7.5.1 This appraisal focuses on effects on groups of visual receptors including local road users, cyclists and residents. Effects on private residential amenity are a separate matter, and as set out above do not merit detailed assessment in respect of the Proposed Development.
- 7.5.2 Local road users, cyclists and residents are considered to be of High/Medium sensitivity as they will have a high susceptibility to changes in the local environment and the views are of Community value.

### **Visual Receptor Groups**

#### Spittal Hill (0.7 km east)

- 7.5.3 This receptor group includes recreational users of several informal routes to Spittal Hill. As people walk towards the summit they gain long-range and panoramic views across lowland agricultural fields, blocks of commercial forestry and vast sweeping moorlands and flows. Other noticeable features consist of Spittal Converter Station, 275 and 132 kV OHL corridors to the west, and operational wind turbines at Achlachan, Halsary, Causeymire and Bad a Che Wind Farms on the skyline to the south to southwest. Upland mountains and distinctive peaks at Ben Dorrery and Beinn Freiceadain are visible on the distant skyline to the southwest. Viewpoint 3 is illustrative of elevated views from the west-facing slope leading to the summit. However, there is no view of the site from the summit itself.
- 7.5.4 During construction, the full extent of construction activities within the site and access track would be visible from the mid-level eastern-facing slopes between the A9 towards Spittal Hill. There would be no view of construction activity from the summit of Spittal Hill or the southeastern approach. Where visible, earthworks, the movement of plant and materials, erection of BESS and substation compounds would be a noticeable addition in a low-level part of the view set against the backdrop of more elevated landform and forestry. The geographical extent of construction activity would be contained within two agricultural fields adjacent to the 132 kV OHL corridor. The scale of change would be Medium/Small across a Limited extent of this receptor group. This Short-term change would result in a Slight magnitude resulting in a **Moderate/Minor Adverse** effect during construction.



- 7.5.5 At year 1 of operation, there would be no view of the Proposed Development from the summit of Spittal Hill. The Proposed Development would be visible from the west-facing slopes and informal routes towards Spittal Hill south of the Spittal Converter Station and alongside the 132 kV OHL corridor. The proposed infrastructure would be contained within low-level agricultural fields and against a backdrop of forestry and gently rising landform. There would be no change to the appreciation of more distinctive mountains across the skyline to the southwest. The introduction of the Proposed Development would increase the presence of electrical infrastructure within the context of existing similar infrastructure. The proposed substation infrastructure would appear alongside similar electrical infrastructure at the adjacent Spittal Converter Station. The permenant access track would follow the Caithness stone field boundary. Some ground-level infrastructure would be screened by the proposed earth screening bund to the east of the battery storage units. The proposed hedgerow would form a new boundary between the native grassland within the site and the pastoral field to the east. Initially the earth screening bunds would appear somewhat uncharacteristic within the surrounding landscape. The scale of change would be Medium/Small across a Limited extent of this receptor group. This Medium-term change would result in a Slight magnitude resulting in a Moderate/Minor Adverse effect.
- 7.5.6 At year 10 of operation, landscape mitigation in the form of the established area of native highland grassland and hedgerow would aid visual integration of the earth screening bunds and separation from the pastoral fields. Earth screening bunds would continue to partially screen low-level views of the battery units. The scale of change would be Medium/Small across a Limited extent of this receptor group. This Long-term change would result in a Slight magnitude resulting in a **Moderate/Minor Adverse** effect.

#### Achanarras Hill (0.7 km southwest)

- 7.5.7 This receptor group includes recreational receptors using the core path (CA06.07) from the B870 to Achanarras Hill Quarry and Nature Reserve and visitors to the quarry information point as a place of interest within the landscape. Views from the car park are low-level and contained by forestry to the west. There are more open views across rising fields to the background of forestry, 132 kV OHL and the west-facing slope of Spittal Hill form the background of views northeast. Views along the core path are contained by adjacent forestry and woodland to the west and east respectively. There are more expansive and long-range views from elevated areas near the quarry and include the distinctive upland hills and mountains to the southwest. Viewpoints 4 and 5 are illustrative of views from this receptor group.
- 7.5.8 During construction, the majority of activity with the compound area would be screened by intervening forestry and localised landform to the east. Earthworks associated with the screening bunds, the movement of plant and vehicles along the access track, and the construction of upper parts of the battery units and substation would be visible beyond a block of forestry from the most elevated part of this receptor group. Construction would be visible against a backdrop of rising landform and would not break the skyline. There would be no change in views from the car park and the entire length of the core path leading to the quarry and the visitor information point at the quarry. The Proposed Development would not affect the appreciation of the distinctive uplands mountains on the skyline to the west. The scale of change would be Small across a Limited extent of this receptor group. This Short-term change would result in a Slight/Negligible magnitude resulting in a **Minor Adverse** effect.



- 7.5.9 At year 1 of operation, views of the Proposed Development would be limited to the most elevated areas near the quarry above intervening landform and forestry in an agricultural field and set against the backdrop of rising landform. Taller parts of the battery storage units and substation infrastructure would appear above the block of forestry and to the south of Spittal Converter Station. The Proposed Development would add to the influence of electrical infrastructure within the context of views. The earth screening bunds would be contained between existing field boundaries. Localised landform and intervening forestry would screen views of the Proposed Development from the car park and the entire length of the core path leading to the quarry and the visitor information point. The scale of change would be Small across a Limited extent of this receptor group. This Medium-term change would result in a Slight magnitude resulting in a **Moderate/Minor Adverse** effect at year 1 of operation.
- 7.5.10 At year 10 of operation, established native grassland would reduce the impression of visual change of the earth screening bunds. The proposed electrical infrastructure would be less perceptible beyond intervening forestry and the scale of change would reduce to Negligible across a Limited extent. This Long-term change would result in a Negligible magnitude resulting in a **Minor/Negligible Adverse** effect at year 10 of operation.

#### Harpsdale Area (2.9 km northwest)

- 7.5.11 This receptor group includes residents and local road users along Bridge Street and Harpsdale. Views of the site from the core of Harpsdale are screened by intervening landform, woodland and forestry. Views from Bridge Street (north of Harpsdale) are panoramic and long-range across predominantly flat open moorland and agricultural fields. More distant upland mountains are distinctive features on the skyline in views west. The 275 kV OHL and Spittal Converter Station are noticeable features set against the backdrop of Spittal Hill from more open parts of this group. Viewpoint 6 is illustrative of views from this receptor group.
- 7.5.12 During construction, there would be a barely perceptible change in views across a small horizontal extent of views available from this receptor group. The Spittal Converter Station and a block of forestry would screen the majority of construction activity. From some locations, the movement of taller plant and construction of the battery units would be barely perceptible across a very limited horizontal extent beyond or adjacent to the Spittal Converter Station and within the immediate context of the OHL corridor. The scale of change is judged to be Negligible across a Limited extent of this group. This Short-term change would give rise to a Negligible magnitude resulting in **Negligible Adverse** effect during construction.
- 7.5.13 At year 1 of operation, the Proposed Development would be barely perceptible across a very small horizontal extent of views between the Spittal Converter Station and a block of forestry immediately adjacent to the OHL corridor. The Proposed Development would appear as a very small extension to the presence of electrical infrastructure within views from this receptor group. The scale of change would be Negligible across a Limited extent of this receptor group. This Medium-term change would result in a Negligible magnitude resulting in a **Negligible Adverse** effect at year 1 of operation.
- 7.5.14 Effects at year 10 of operation would be the same as at year 1. The level of effect at year 10 would remain **Negligible Adverse**.



### **Key Routes**

#### **A9**

- 7.5.15 Within the study area, this route comprises a very short section of the A9 north of Spittal. Although views are generally focused on the direction of travel north or south, views of the landscape contribute to the experience within Caithness area and are of High susceptibility. Overall visual sensitivity is High/Medium. Medium to long-range views west towards the site extend across low-level agricultural fields and a backdrop of forestry and rising landform and with more upland mountains on the skyline. The double 132 kV OHL and 275 kV OHL are 0.5 km west and a noticeable and consistent feature in views on this route through the study area. The Spittal Converter Station is also noticeable along a very short section north of Spittal. Views east are contained by steeply rising landform and comprise of rough pasture and blocks of commercial forestry. Viewpoints 1 and 2 are illustrative of views from the A9.
- 7.5.16 During construction, vegetation clearance, the movement of plant along the access track, earthworks associated with the earth screening bunds, use of temporary compounds, laydown areas and construction of battery storage units and substation would be visible along a 1 km section of the A9 as shown on the ZTVs (Figures 2 and 3). Sequential views of construction activities would be fleeting and oblique to the direction of travel. Views of vehicles along the access track connection to the A9 would be more noticeable with closer proximity to the site. On balance, the scale of change would be Medium/Small across a Limited extent of this route. This Short-term change would give rise to a Slight/Negligible magnitude resulting in a **Minor Adverse** effect at construction.
- 7.5.17 At year 1 of operation the Proposed Development would be visible across a small horizontal extent of views along a very short (approximately 1 km) section of this route. As shown in Viewpoints 1 and 2, the upper parts of the proposed battery storage units and substation infrastructure would appear above proposed earth screening bunds within low-level agricultural fields adjacent to the Spittal Converter Station and below the double OHL corridor. The Proposed Development would be set against more elevated blocks of forestry and rising fields to the west. The earth bunds would screen ground-level infrastructure, operational movement and the majority of the battery units. The upper parts of the substation would be perceptible alongside similar infrastructure at the Spittal Converter Station. Initially the screening bunds would appear somewhat uncharacteristic in appearance within the adjacent flat pastoral field.
- 7.5.18 The earth screening bunds would screen the majority of the proposed battery storage units and substation. However, the initial appearance of the bunds would appear incongruent within flat open fields and the limited visibility of some battery units and substation infrastructure would slightly extend the influence of electrical infrastructure within views along a very short section of this route. The scale of change is judged to be Medium/Small across a Limited extent of this route. This Medium-term change would give rise to a Slight magnitude resulting in a **Moderate/Minor Adverse** effect at year 1 of operation.
- 7.5.19 At year 10 of operation, established landscape mitigation including native grassland and hedgerow would aid visual integration of the proposed earth screening bunds. The native hedgerow would delineate the boundary between the pastoral fields adjacent to the A9 and native grassland within the site boundary. The extent of proposed infrastructure visible would be the same as at year 1. The scale of change would be Small across a Limited extent of this route. This Long-term change would give rise to a Slight/Negligible magnitude resulting in a **Minor Adverse** effect at year 10 of operation.



### 7.6 Cumulative Effects

### Introduction

- 7.6.1 The approach to cumulative assessment is set out in Appendix 1. The cumulative assessment focuses on the additional cumulative change which would be brought about by the Proposed Development. The relevant cumulative schemes are shown on Figure 7 and based on the following cumulative scenarios:
  - Scenario 1: Existing, under construction and consented schemes.
  - **Scenario 2**: Existing, under construction, consented, application schemes and scoping schemes with sufficient project details.
- 7.6.2 There are several schemes at application or scoping stage related to underground cables with no operational footprint. These have been excluded from the landscape and visual cumulative assessment. The cumulative schemes that warrant further consideration are outlined in Table 7.2 below.

Name	Application Reference	Status	Scenario	Distance	Description
Banniskirk Hub (New Spittal Area 400kV substation and HVDC converter station)	23/05829/SCO P (THC)	Scoping	2	2 km, NE	Spittal Substation and HVDC Converter Station - New 400kv Substation & HVDC Converter Station To Connect To The Proposed New 400kv Overhead Line between Spittal & Beauly, The New Spittal To Peterhead HVDC Link, And The Existing Spittal 275/132kv Substation
Mybster Croft BESS	23/05424/FUL (THC)	Application	2	2.9 km, SE	Erection and operation of a 47MW capacity battery energy storage facility, comprising containerized battery storage units, inverters, transformers, switch room, site access, landscaping, fencing and ancillary infrastructure.
Ouglassy Wind Farm	ECU00005046 (ECU) 24/00902/SCO P (THC)	Scoping	2	1.7 km, NW	The Proposed Development will comprise up to eight wind turbines, with a blade tip height of up to 180m, Battery Energy Storage System (BESS) technology, associated infrastructure and ancillary development
AchanarrasBESS	ECU00005078 (ECU)	Scoping	2	0.7 km, NW	The construction and operation of a 200 Megawatt Energy Storage System, associated access,

Table 7.2 Consented and Application Cumulative schemes



	24/02020/SCR E (THC)				landscaping and habitat creation.
Spittal – Loch Buidhe – Beauly 400kV Connection	ECU00006008 (ECU)	Scoping	2	1.8 km, NW/W/SW	A new 400kV connection between Spittal and Loch Buidhe and between Loch Buidhe and Beauly

7.6.3 Receptors judged to receive Negligible magnitude of effect are not considered for cumulative assessment on the basis that any notable effects arising would primarily be caused by the cumulative developments and the addition of the Proposed Development is unlikely to make a notable contribution.

### **Cumulative Landscape Effects**

- 7.6.4 Cumulative landscape effects would be limited to LCT 143 Farmed Lowland Plain. Most of the cumulative schemes would be located within this LCT (except for Mybster BESS located in the LCT to the south) and would present a localised cluster of energy generation and transmission infrastructure towards the south of this LCT within 1.5 km of the A9 and existing 275 kV and 132 kV OHL corridor.
- 7.6.5 Cumulative scenario 1 is limited to the addition of the Proposed Development with existing energy generation and transmission schemes. Therefore, cumulative effects under this scenario would be the same as the non-cumulative situation. Relevant existing schemes within the study area and this LCT comprise of the 275 kV OHL and the double 132 kV OHLs that connect into the Spittal Converter Station. The addition of the Proposed Development would result in a limited increase in the influence of energy generation and transmission schemes within a small part of the LCT, within agricultural fields and adjacent to the existing electrical infrastructure. There would be some limited impression of additional change in land use and presence of electrical infrastructure in views from elevated areas and the A9. The cumulative magnitude would be Slight/Negligible resulting in a **Minor/Negligible Adverse** cumulative effect.
- 7.6.6 Cumulative scenario 2 comprises of several schemes at Scoping stage the exact nature of which may be subject to change as the planning submissions progress. There would be very limited potential intervisibility between the Proposed Development and most of the Scenario 2 cumulative schemes with the exception of Achanarras BESS. Mybster Croft BESS would be located in the neighbouring LCT to the south. The addition of the Proposed Development would result in a limited increase in energy infrastructure at a locality in the modified agricultural landscape where energy infrastructure would become concentrated around the existing infrastructure. The magnitude would be Slight resulting in a **Minor Adverse** cumulative effect.

### **Cumulative Visual Effects**

- 7.6.7 The cumulative visual assessment is limited to the Spittal Hill, Achanarras Hill receptor groups and the A9 key route. Considering there are no consented or under construction schemes, the cumulative assessment of visual receptor groups for cumulative scenario 1 would be no greater than the non-cumulative assessment (year 10 operation).
- 7.6.8 **Spittal Hill**: Cumulative schemes visible from the Spittal Hill group are likely to include Banniskirk Hub, Ouglassy Wind Farm, Achanarras BESS and the Spittal – Loch Buidhe – Beauly 400 kV Connection. In this cumulative scenario, the addition of the Proposed



Development would be visible in sequential views on informal routes resulting in a limited increase in the range of energy generation and transmission infrastructure within open and expansive views across the landscape. There would be no view of the Proposed Development from the summit of Spittal Hill. The cumulative magnitude would be Slight resulting in a **Moderate/Minor Adverse** cumulative effect.

- 7.6.9 **Achanarras Hill**: The proposed Achanarras BESS and Banniskirk Hub would be perceptible in wider panoramic views from the most elevated part of the quarry area. Banniskirk Hub would be less perceptible in distant views. There would be no cumulative change from most of this receptor group. The addition of the Proposed Development would result in the expansion of BESS infrastructure concentrated in close proximity to the existing OHL corridor, Spittal Converter Station and the A9. The cumulative magnitude would be Slight/Negligible resulting in a **Minor Adverse** cumulative effect.
- 7.6.10 **A9:** The proposed cumulative schemes would not appear in combination with the Proposed Development. Mybster Croft BESS, Banniskirk Hub and Spittal Loch Buidhe Beauly 400kV Connection would be visible in sequential views along a short (less than 3 km) section of the A9. The addition of the Proposed Development would result in a limited increase of energy infrastructure visible in close proximity to the A9 but limited in geographic extent. The cumulative magnitude would be Slight resulting in a **Moderate/Minor Adverse** cumulative effect.

### 7.7 Summary of Landscape and Visual Effects

- 7.7.1 There would be no notable effects on landscape character with potential effects confined to the site fabric and its immediate surroundings, within around 1km. These would be limited to the host LCT 143 Farmed Lowland Plain.
- 7.7.2 Visual effects within close proximity to the Proposed Development from the A9 would be Minor Adverse at construction, Moderate/Minor at year 1 of operation, reducing to Minor Adverse at year 10 of operation. The proposed earth screening bunds would screen the majority of battery storage units and substation infrastructure from the A9. The initial impression of change would reduce once landscape mitigation measures have established.
- 7.7.3 There would be more open views of the Proposed Development from informal routes on the west facing slope of Spittal Hill and the effects would be no greater than Moderate/Minor at construction and at year 1 and year 10 of operation. Visual effects from other receptor groups would be Minor, Minor/Negligible or Negligible Adverse due to the screening effect of intervening localised landform, Spittal Converter Station and blocks of forestry and woodland.
- 7.7.4 Cumulative effects in cumulative scenario 1 would be the same as the non-cumulative assessment. The addition of the Proposed Development into cumulative scenario 2 would lead to Minor Adverse effects on LCT 143, where there would be a slight intensification of energy infrastructure within a localised part of the landscape. Cumulative visual effects would be Moderate/Minor Adverse and limited to sequential views from informal routes to Spittal Hill and Minor Adverse from the most elevated vantage points at Achanarras Hill where the Proposed Development would appear in combination with other proposed BESS and substation infrastructure. Cumulative visual effects would be limited to a very short section A9 where the Proposed Development would appear in sequential views with Mybster Croft and BESS and Banniskirk Hub.



#### Table 7.3 Summary of Effects

Receptor	Sensitivity	Construction Magnitude	Construction Level of Effect	Operation Year 1 Magnitude	Operation Year 1 Level of Effect	Operation Year 10 Magnitude	Operation Year 10 Level of Effect	Cumulative Level of Effect
LCT 143 Farmed Lowland Plain	Low	Slight	Minor Adverse	Slight	Minor Adverse	Slight/Negligible	Minor/Negligible Adverse	Minor/Negligible Adverse (Scenario1) Minor Adverse (Scenario 2)
Spittal Hill	High/Medium	Slight	Moderate/Minor Adverse	Slight	Moderate/Minor Adverse	Slight	Moderate/Minor Adverse	Moderate/Minor Adverse
Achanarras Hill	High/Medium	Slight/Negligible	Minor Adverse	Slight	Moderate/Minor Adverse	Negligible	Minor/Negligible Adverse	Minor Adverse
Harpsdale Area	High/Medium	Negligible	Negligible Adverse	Negligible	Negligible Adverse	Negligible	Negligible Adverse	NA
A9	High/Medium	Slight/Negligible	Minor Adverse	Slight	Moderate/Minor Adverse	Slight/Negligible	Minor Adverse	Moderate/Minor Adverse



## 8 REFERENCES

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## APPENDIX 9.1:

## LANDSCAPE AND VISUAL APPRASIAL ASSESSMENT METHODOLOGY AND CRITERIA

### Introduction

- 1. The purpose of a Landscape and Visual Appraisal (LVA) is to identify and report the level of landscape and visual effects arising from the Proposed Development.
- 2. The following appendix sets out the methodology and criteria against which the appraisal of landscape and visual effects has been undertaken.
- 3. The Guidelines for Landscape and Visual Impact Assessment (Third Edition) (GLVIA3)<sup>1</sup> are widely recognised as the primary source of guidance for LVA in the UK but clearly state that: "The guidance concentrates on principles while also seeking to steer specific approaches where there is a general consensus on methods and techniques. It is not intended to be prescriptive, in that it does not provide a detailed 'recipe' that can be followed in every situation. It is always the primary responsibility of any landscape professional carrying out an assessment to ensure that the approach and methodology adopted are appropriate to the particular circumstances." (paragraph 1.20)
- 4. GLVIA 3 also states that: "professional judgement is a very important" (paragraph 2.23) and that "in all cases there is a need for the judgements that are made to be reasonable and based on clear and transparent methods so that the reasoning applied at different stages can be traced and examined by others." (paragraph 2.24).
- 5. Wherever possible, identified effects are quantified, but as noted above, the nature of LVA requires interpretation using professional judgement. In order to provide a level of consistency to the LVA, the appraisal of landscape and visual effects is based on pre-defined criteria as set out in this appendix.
- 6. Landscape and Visual Appraisals are separate, though linked processes which GLVIA3 notes are *"related but very different considerations"*. The appraisal of the potential effect on the landscape is carried out as an effect on the environmental resource (i.e. the landscape). Visual effects are appraised as an inter-related effect on people.
  - Landscape effects derive from changes in the physical landscape elements which may give rise to changes in its distinctive character and how this is experienced, including consideration of aesthetic and perceptual aspects.
  - Visual effects relate to changes that arise in the composition of available views as a result of changes to the landscape, to people's responses to the changes and to the overall effects with respect to visual amenity.

## **Establishing the Baseline**

7. The baseline for consideration of landscape and visual effects is evaluated through desk study and site work and is the current situation at the time of the appraisal, unless noted otherwise. Existing

<sup>&</sup>lt;sup>1</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment Third Edition*; Spon; 2013



operational/ built development and development under construction is considered as part of the baseline.

8. The **future baseline**, where relevant, incorporates any anticipated natural change to the landscape (eg change to land cover through natural regeneration or forestry rotation), and also in the case of built development, changes which are considered certain or likely to happen (including consented proposals which are not yet present in the landscape but which are expected to be constructed). These may or may not be included as part of the landscape and visual baseline depending on individual project circumstances. Where the future baseline differs from the current baseline, it is clearly stated in the LVA which baseline has been adopted for the appraisal of effects and a rationale for the approach taken is provided as necessary.

### **Direct and Indirect Effects**

9. Direct and indirect effects are defined in GLVIA3. Direct effects may be defined as resulting *"directly from the development itself"* (paragraph 3.22). An indirect (or secondary) effect is one that results *"from consequential change resulting from the development"* (paragraph 3.22) and is often produced away from the site of the proposed development or as a result of a complex pathway or secondary association.

### Landscape Effects

- 10. The starting point for an appraisal of landscape effects is a desk-based assessment of published landscape studies, which may include landscape character assessments, sensitivity and capacity studies and/or landscape designation reviews. Relevant documents are listed as appropriate in the appraisal and relevant extracts may be included as appendices where this is judged appropriate. Desk based assessment is supplemented by field work to verify the key characteristics of the landscape.
- 11. In accordance with GLVIA3, the level of landscape effects is determined by combining judgements regarding the sensitivity of the receiving landscape and the magnitude of the landscape effects arising from the Proposed Development.
- 12. An appraisal of the degree to which the proposed development changes "*distinct and recognisable pattern of elements, or characteristics, in the landscape that make one landscape different from another, rather than better or worse*" ('An Approach to Landscape Character Assessment', Natural England, 2014), enables a judgement to be made as to the level of the effect in landscape character terms.
- 13. In order to reach an understanding of the effects of development upon the landscape resource it is necessary to consider different aspects of the landscape baseline including:
  - Landscape Fabric/Elements: The individual features of the landscape, such as hills, valleys, woods, hedges, tree cover, vegetation, buildings and roads for example which can usually be described and quantified.
  - Landscape key characteristics: The particularly notable elements or combinations of elements which make a particular contribution to defining or describing the character of an area, which may include experiential characteristics such as wildness and tranquillity.

### Landscape Sensitivity

14. It should be noted, as stated in GLVIA3, "LVIA sensitivity is similar to the concept of landscape sensitivity used in the wider arena of landscape planning but is not the same as it is specific to the



*particular project or development that is being proposed and to the location in question"* (paragraph 5.39).

- 15. In LVA, landscape sensitivity is assessed by combining judgements about the value attached to a landscape and its susceptibility to the type of change and nature of the development proposed. The overall sensitivity of the landscape to a particular development is described in the appraisal as **High**, **Medium** or **Low**.
  - Landscape Value: This is the relative value or importance attached to different landscapes by society on account of their landscape qualities. Sometimes it is used as a basis for designation or recognition which expresses national or local authority consensus, because of its special qualities/attributes. Whilst the presence of formal designations are an important component when determining landscape value, other aspects are also considered as part of the judgement process as explained in Landscape Institute Technical Guidance Note 02-21<sup>2</sup>, especially when considering the value of landscapes outside of national designations. These include factors related to natural and cultural heritage (for example ecological, geological or heritage matters), landscape condition, cultural associations (in terms of connections with people, arts or events), distinctiveness (i.e. a sense of unique identity in the landscape), recreational opportunities, perceptual aspects (including scenic quality, wildness and tranquility) and landscapes with a clearly identifiable role or function. In this appraisal, the value attributed to the landscape is described as: National, Regional or Community.
  - Landscape Susceptibility: Landscape Susceptibility according to GLVIA3 means "the ability of the landscape receptor to accommodate the proposed Development without undue consequences for maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies" (paragraph 5.40). The susceptibility of the landscape varies depending on the type of development proposed and the particular site location. Judgements on landscape susceptibility include references to both the physical and aesthetic characteristics and the potential scope for mitigation. In this appraisal, the susceptibility of the landscape is described as **High, Medium** or **Low**.
- 16. The criteria and the detailed judgements regarding susceptibility and value of landscape receptors are identified within the sensitivity tables included within **Appendix 3** to this appraisal.
- 17. Sensitivity is evaluated taking into account the component judgements about the value and susceptibility of the receptor as illustrated by the table below. Where sensitivity is judged to lie between levels, an intermediate assessment is adopted. Note that equal weighting is attributed to susceptibility and value when determining overall landscape sensitivity.

		Susceptibility				
		High	Medium	Low		
e	National	High	High/Medium	Medium		
	Regional	High/Medium	Medium	Medium/Low		
Value	Community	Medium	Medium/Low	Low		

<sup>2</sup> Landscape Institute Technical Guidance Note 02-21: Assessing Landscape Value Outside National Designations



### Magnitude of Landscape Change

- 18. The magnitude of landscape change arising from the proposed development at any particular location is assessed in terms of *"size or scale, the geographic extent of the area or receptor that is influenced and its duration and reversibility"* (paragraph 5.48).
- 19. Judgements concerning the Scale of the change take account of:
  - degree of loss or alteration to key landscape features/elements; characteristics; and for designated areas special qualities and/or purposes of designation;
  - distance from the development; and
  - landscape context to the development.
- 20. The approach to appraising effects on landscape character is to consider the key characteristics for the Landscape Character Area (LCA) within which the proposed development is located (the host LCA) and if relevant the adjacent LCA's (non-host) and identify which of these the proposed development would affect. A large scale change in landscape character is likely to occur where key characteristics would be lost or substantially changed. A small scale change is likely to occur where key characteristics are altered to a lesser degree and this can be influenced by distance and surrounding context.
- 21. Where particular views are a key characteristic of a landscape type, large or medium scale landscape character effects may occur where the proposed development becomes a key feature of those views. A similar approach applies to designated landscapes, for which the effects on the defined purposes of designation and special qualities are considered.
- 22. In this appraisal, the scale of landscape change is described as: Large, Medium, Small or Negligible.
- 23. Having established the scale of change to the landscape baseline, the **Geographic Extent** of the change can be identified. In this appraisal, the geographical extent of landscape change is described as: **Wide, Intermediate, Localised** or **Limited**.
- 24. **Duration and Reversibility** can be linked depending on the nature of the development. Reversibility is a judgement about the practicality of reversing the landscape effects of the proposed development (for example, solar farms are ultimately largely reversible whilst housing is permanent). Duration reflects how long the change will last and can include frequency the effect would be experienced. In this appraisal, the duration of the change would be considered:
  - **short term** when lasting less than 2 years;
  - medium term when lasting between 2 and 10 years;
  - long term when lasting between 10 and 40 years, and
  - permanent for more than 40 years.
- 25. Magnitude is considered taking into account the three contributory factors as illustrated by the diagrams in Plate 1 below.

### **Visual Effects**

26. In accordance with GLVIA3, the level of visual effects is determined by combining judgements regarding the sensitivity of visual receptors (people who view the landscape) and the magnitude of the change they experience arising from the Proposed Development.



### **Visual Receptor Sensitivity**

- 27. In visual appraisal, visual receptor sensitivity is assessed by combining judgements about the value attached to views and the susceptibility of the viewer to the type of change and nature of the development proposed. The overall sensitivity of the visual receptor to a particular development is described in this appraisal as **High**, **Medium** or **Low**.
  - Value of Views: The value of public views, which is the focus of GLVIA3, will vary depending on the nature, location and context of the view and the recognised importance of the view. Considerations include cultural associations; designation or policy protection; views of or from landmarks; and/or the scenic quality of the view. It should be noted that the value attributed relates to the value of the view only (e.g. a National Trail is nationally valued for access, but not always for the available views from every section). In this appraisal, the value attributed to visual amenity is described as: National, Regional or Community.
  - **Susceptibility of Visual Receptors**: Those living within view of the Proposed Development are usually regarded as the highest susceptibility group as well as those engaged in outdoor pursuits for whom landscape experience is the primary objective. The susceptibility of potential visual receptors will also vary depending on the activity of the receptor. For visual receptors, susceptibility and value are closely linked the most valued views are also likely to be those where viewer's expectations will be highest. In this appraisal, visual receptor susceptibility is defined in accordance with the criteria below.

**High** - Local residents; tourists; people engaged in outdoor recreation focused on an appreciation of views including users of footpaths and quiet country lanes, beauty spots and picnic areas and people experiencing views to or from important features of physical, visual, cultural or historic interest.

**Medium** - Local road users and travellers on trains. People engaged in outdoor recreation with some appreciation of the landscape e.g. road cycling, nature conservation, golf and water based recreation.

**Low** - Workers, users of facilities and commercial buildings (indoors) experiencing views from buildings. Road and rail users on fast moving commuting or trunk routes. Visual receptors where views are incidental to the activity and/or location.

28. Sensitivity is evaluated taking into account component judgements about the value and susceptibility of the receptor as illustrated by the table below. Where sensitivity is judged to lie between levels, an intermediate assessment is adopted. Note that a greater weight is intentionally attributed to the susceptibility of the visual receptor than to value. This is in recognition of the fact that relatively few views are specifically recognised through designation or cultural reference. This approach still acknowledges that value associations influence sensitivity.

		Susceptibility			
		High	Medium	Low	
	National	High	High/Medium	Medium	
/alue	Regional	High/Medium	High/Medium	Medium/Low	
Val	Community	High/Medium	Medium	Low	



### Magnitude of Visual Change

- 29. The magnitude of visual change arising from the Proposed Development is appraised in terms of its size or scale, geographic extent of the area or receptor that is influenced and its duration.
- 30. Representative viewpoints are used in the LVA as 'samples' on which to base judgements of the scale of change experienced by visual receptors. The wider extent of the effect and its duration are not captured in the viewpoint analysis (as a viewpoint cannot capture these factors for an entire route or area). As duration and extent are necessary considerations in determining magnitude of change, judgements concerning magnitude and level of effect are provided for visual receptors and not for representative viewpoints. The only exception to this would be a specific viewpoint where people visiting that location to look at the view are assessed as a visual receptor group in its own right.
- 31. With the exception of specific viewpoints (as noted above), each route (e.g. a footpath or road) and receptor group (e.g. a community or village) will encompass a range of possible views, which might vary from no view of the development to very clear, close views. Therefore, effects are described in such a way as to identify where views towards the development are likely to arise and what the scale and duration and extent of those views is likely to be. In some cases, this will be further informed by a nearby viewpoint and in others it will be informed with reference to ZTV studies, aerial photography and site visits. Each of these individual effects are then considered together in order to reach a judgement of the effects on the visual receptors along that route, or in that place.
- 32. The Scale of change arising from the Proposed Development as experienced by a visual receptor group reflects the degree to which the nature of the views from that location would be changed taking into account:
  - The distance of the viewpoint from the development;
  - the degree to which the development is visible or screened;
  - the angle of view in relation to main receptor activity or main focus of the view;
  - the horizontal and vertical field of view occupied by the development; and
  - the extent and nature of other built development visible.
- 33. In this appraisal, the scale of change in view is described as: Large, Medium, Small or Negligible.
- 34. The approach to appraising effects on views is to consider the full 360 degree view from any given receptor not just those towards the development and/or shown in visualisations. It is assumed that the change would be seen in clear visibility and the appraisal is carried out on that basis. Seasonal variation in visibility due to varying vegetation cover is also taken into account in all judgements. Where there are operational developments considered as part of the baseline, the visual effects consider the effects of adding the proposed development to that baseline. Where appropriate, comment may be made on lighting and weather conditions.
- 35. For visual receptors moving through the landscape (e.g. road and footpath users), the length of their journey during which they would see the Proposed Development is reflected in the judgement of the **Geographic Extent** of effects. In this appraisal, the geographical extent of visual change is described as: **Wide, Intermediate, Localised** or **Limited**.
- 36. **Duration** reflects how long the change will last and judgements are framed in the same way as described above for landscape effects. In this appraisal, the duration of the change would be considered:
  - short term when lasting less than 2 years;
  - medium term when lasting between 2 and 10 years;
  - long term when lasting between 10 and 40 years, and



- **permanent** for more than 40 years.
- 37. Magnitude is considered taking into account the three contributory factors as illustrated by the diagrams in Plate 1 below.

### Combining Scale of Change, Extent and Duration to Determine Magnitude of Landscape and Visual Effects

- 38. Scale of change is the first and primary factor in determining magnitude. Geographical extent and duration of the effect are modifying factors to the overall magnitude judgement which may be higher if the effect is particularly widespread and/or long lasting, or lower if it is constrained in geographic extent and/or timescale.
- 39. The diagrams presented below in Plate 1 illustrate in outline how these two modifying factors are considered in a two-stage process. A judgement is first formed about the scale of the change to the landscape or visual receptor. The geographic extent of the effect is then considered as a modifying influence in the first part of Plate 1 (Stage 1). The result or outcome of Stage 1 is then considered again in relation to the duration of the effect as illustrated in the second part of Plate 1 (Stage 2). The outcome of Stage 2 is the overall magnitude of effect judgement reported in the assessment. Plate 1 is not intended to be interpreted rigidly as a chart to provide definitive answers; professional judgement is employed as appropriate to arrive at an overall magnitude judgement.
- 40. In this appraisal, the magnitude of effects is described as **Substantial**, **Moderate**, **Slight** or **Negligible**. Where magnitude is judged to lie between levels, an intermediate assessment will be adopted.

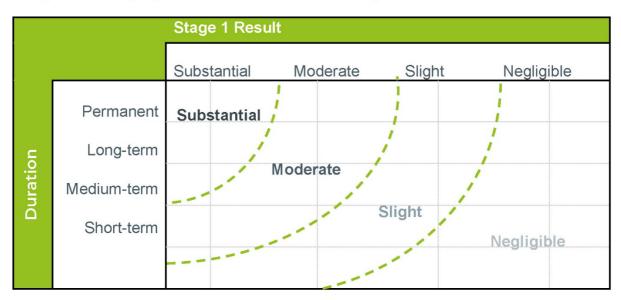


Plate 1 Combining Scale of Change, Extent and Duration to Determine Magnitude of Landscape and Visual Effects





#### Stage 2 - Modifying Influence of Duration on Magnitude of Effect





### Level of Landscape and Visual Effects

41. The level of any identified landscape or visual effect is described as **Major**, **Moderate**, **Minor** or **Negligible**. These categories are based on the consideration of receptor sensitivity with the predicted magnitude of effect. The table below is not used as a prescriptive tool and illustrates the typical outcomes, allowing for the exercise of professional judgement. In some instances a particular parameter may be considered as having a determining effect on the analysis.

			Magnitude of Effect					
			Substantial	Moderate	Slight	Negligible		
or	Sensitivity	High	Major	Major/ Moderate	Moderate	Minor		
	usit	Medium	Major/ Moderate	Moderate	Moderate/ Minor	Minor/ Negligible		
	Se	Low	Moderate	Moderate/ Minor	Minor	Negligible		

### Beneficial/Adverse

- 42. Landscape and visual effects can be beneficial or adverse and in some instances may be considered neutral. Neutral effects are those which overall are neither adverse nor positive but may incorporate a combination of both. Whether an effect is beneficial, neutral or adverse is identified based on professional judgement. GLVIA 3rd edition indicates at paragraph 2.15 that this is a "*particularly challenging*" aspect of assessment, especially in the context of a changing landscape.
- 43. However, for the avoidance of doubt, in this appraisal it has been assumed that where new infrastructure is introduced into the landscape or views, this will generally constitute an adverse effect. Any variation from this stance will be clearly justified.

### **Cumulative Effects**

- 44. In a broad generic sense, cumulative impacts "*result from the incremental changes caused by other past, present or reasonably foreseeable actions together with the project*"<sup>3</sup> However, an assessment of cumulative effects should focus on whether there are any potential cumulative impacts which are reasonably foreseeable and which are likely to influence the decision making of the proposed development, rather than an assessment of every potential cumulative effect<sup>4,</sup> which in practice means focusing on other nearby development proposals and the effects that might arise from the combined influence of those developments on landscape and visual receptors.
- 45. As recommended by the NatureScot cumulative guidance, this appraisal focusses on the "additional cumulative change which would be brought about by the proposed development"<sup>5</sup>.

<sup>4</sup> GLVIA3 page 121 paragraph 7.5.

<sup>&</sup>lt;sup>3</sup> GLVIA3 page 120, paragraph 7.1 quoting Hyder, 1999 ' *Guidelines for the assessment of indirect and cumulative impacts as well as impact interactions*'

<sup>&</sup>lt;sup>5</sup> Assessing the Cumulative Impact of Onshore Wind Energy Developments, NatureScot, 2021



- 46. As noted above, operational developments are included in the baseline. Where there is some uncertainty regarding the future construction of consented developments, they may be considered as the first scenario of the cumulative assessment.
- **47. Cumulative Scenario 1:** Consented Development and development that is at the early stages of construction not considered in the noncumulative baseline.
- 48. **Cumulative Scenario 2**: considers everything described in Scenario 1 and proposals in planning and not yet decided, proposals in scoping where there is less certainty that these proposals will progress to planning submissions and the nature of the proposed schemes may be subject to change.
- 49. The appraisal is based on the same landscape and visual baseline and receptor groups as the main LVA, and the methodology is also the same in terms of forming and expressing judgements.
- 50. Cumulative effects on landscape receptors arise from combined direct and/or indirect effects on the same receptor such as two developments within the same character area; or one development within, and one visible from, a designated area.
- 51. Cumulative effects on visual receptors arise either from two (or more) developments both being visible from the same place; or from sequential views as people travel through the landscape.
- 52. In order to simplify the following approaches is used for this LVA:
  - The cumulative assessment considers scenarios within which developments may be 'grouped' for instance two nearby cumulative proposals may be considered in one scenario if it is considered that the cumulative effects arising if one or both are developed are likely to be similar.
  - Receptors judged to receive Negligible or Slight-Negligible magnitude effects are not considered for cumulative effects on the basis that any significant effects arising would primarily be caused by the cumulative developments and would be unlikely to be contributed to by the proposed development.
  - Only those receptors judged likely to experience effects from the cumulative development(s) being considered within a given scenario are described within that scenario.
- 53. Qualitative assessment of design and aesthetic considerations arising as a result of cumulative development, and/or considerations set out within local guidance provided in relation to cumulative development, is also provided where relevant.

Term	Definition
CLVIA	Cumulative Landscape and Visual Impact Assessment.
Cumulative Effects	Cumulative effects are the additional effects arising from changes caused by a development in conjunction with other past, present or reasonably foreseeable actions.
Direct Effect	A direct (or primary) effect may be defined as an effect that is directly attributable to the development. <sup>6</sup>
GLVIA3	<i>'Guidelines for Landscape and Visual Impact Assessment, Third Edition'</i> , published jointly by the Landscape Institute and Institute of Environmental Management and Assessment 2013.

#### ANNEX 1: GLOSSARY OF TERMS

<sup>6</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p155



Term	Definition
Indirect Effect	An indirect (or secondary) effect is an effect that results indirectly from the proposed project as a consequence of the direct effect, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects. <sup>7</sup>
Key Characteristics	Those combinations of elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.
LVA	Landscape and Visual Appraisal
Landscape Capacity	The amount of change which a particular landscape character type or area is able to accommodate without significant detrimental effects on its character. Capacity is likely to vary according to the type and nature of change proposed.
Landscape Character	The distinct and recognisable pattern of elements in the landscape that makes one landscape different from another, rather than better or worse. 8
Landscape Character Areas	These are single unique areas which are the discrete geographical areas of a particular landscape type. $^{\rm 9}$
Landscape Character Types	These are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur, they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement pattern, and perceptual and aesthetic attributes.
Landscape Effects	Effects on the landscape as a resource in its own right. <sup>10</sup>
Landscape Elements	Individual components which make up the landscape such as trees and hedges.
Landscape Features	Particularly prominent or eye-catching elements, like tree clumps, church towers or wooded skylines.
Landscape Quality or Condition	This is a measure of the physical state of the landscape. It may include the extent to which a typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements. <sup>11</sup>
Landscape Receptor	Defined aspects of the landscape resource that have the potential to be affected by a proposal.
Landscape Resource	The combination of elements that contribute to landscape context, character and value.

<sup>7</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p156

- <sup>8</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p156
- <sup>9</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p157
- <sup>10</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p157
- <sup>11</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p157



Term	Definition
Landscape Value	The relative value or importance attached to different landscapes by society on account of their landscape qualities. <sup>12</sup>
Level of Effect	Determined through the combination of sensitivity of the receptor and the proposed magnitude of change brought about by the development.
Magnitude (of effect)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.
Mitigation	Measures including any process, activity or design to avoid, reduce, remedy or compensate for adverse environmental impact or effects of a development.
Photomontage	A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs.
Residential Visual Amenity	A collective term describing the views and visual amenity from a residential property, relating to the type, nature, extent and quality of views that may be experienced from the property and its 'domestic curtilage' including gardens and access driveway. Residential Visual Amenity is only one component of the overall Residential Amenity, others being for example noise, shadow flicker and access amongst others.
Residual Effects	Potential environmental effects remaining after mitigation.
Sense of Place	The essential character and spirit of an area: <i>genius loci</i> literally means 'spirit of the place'.
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor. <sup>13</sup>
Type or Nature of Effect	Whether an effect is direct, indirect, temporary or permanent, positive (beneficial), neutral or negative (adverse) or cumulative.
Visual amenity	Value of a particular place in terms of what is seen by visual receptors taking account of all available views and the total visual experience.
Visual Effect	Effects on specific views and on the general visual amenity experienced by people. <sup>14</sup>
Visual Receptors	Individuals and/or defined groups of people who have the potential to be affected by a proposal.
Visualisation	Computer simulation, photomontage or other technique to illustrate the appearance of a development. $^{\rm 15}$
Wildness	A quality of appearing to be remote, inaccessible and rugged with little evidence of human influence.

<sup>12</sup> The Landscape Institute; Technical Guidance Note 02/21 Assessing Landscape Value Outside National Designations

<sup>13</sup> The Landscape Institute/Institute of Environmental Management and Assessment; Guidelines for Landscape and Visual Impact Assessment; Spon; 2013; p157

<sup>14</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p158

<sup>15</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p158



Term	Definition
Wireframe or Wireline	A computer generated line drawing of the DTM (Digital Terrain Model) and the proposed development from a known location.
Zone of Theoretical Visibility (ZTV)	Area within which a proposed development may have an influence or an effect on visual amenity. $^{\rm 16}$

<sup>&</sup>lt;sup>16</sup> The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p158



# APPENDIX 2: VISUALS METHODOLGY

### **Guidance and Standards Used**

1. All Visibility Maps (ZTVs), photography, visualisations (wirelines and photomontages) and their graphical presentation has been undertaken in line with the guidance provided by 'Visualisation Standards for Wind Energy Developments', The Highland Council, 2016 has also informed the approach and visualisations provided.

### The Computer Model

- 2. To generate wireline visualisations and photomontages, computer models of the proposed site and study area are produced. Sketchup, Autodesk 3DS Max and VRay software are used to create a 3D computer model of the proposed development representing the specified geometry and position of the proposed development, and the existing landform (terrain). The landform information is derived from 50m resolution terrain data incorporating 5m resolution terrain data around the site and each viewpoint and viewpoints where required (either by local guidance, or where we judge it is needed for accurate modelling).
- 3. The computer models include the entire study area and all calculations take account of the effects caused by atmospheric refraction and the Earth's curvature. The computer models do not take account of the screening effects of any intervening objects such as vegetation, buildings or other non-terrain features, unless expressly stated.
- 4. The computer models combine the existing landform with the model of the proposed development and detailed data collected in the field to enable the output of accurate visual and graphical information and associated data for presentation as finished figures.

### Visibility Maps: Zone of Theoretical Visibility

- 5. Zone of Theoretical Visibility (ZTV) maps have been generated using GIS to assist in in identifying areas where visibility would not occur as well as viewpoint selection, illustrate areas from where part or all of the proposed development may be visible and to indicate its potential influence in the wider landscape.
- 6. Unless expressly stated, the visibility maps present the extent of potential visibility on the basis of a 'bare ground' scenario: They do not account for the effects of screening and filtering of views as a result of intervening features (e.g. buildings, trees, hedgerows, etc) and so tend to over-estimate visibility, both in terms of the area from which the project can potentially be seen and potentially in terms of the extent of the development visible from a particular viewpoint.
- 7. ZTVs which include vegetation and buildings may use real height information derived from standard DSM products such as LiDAR this approach is typically used for smaller study areas and urban areas. For larger study areas assumed heights are used which are stated on the ZTV figure. The location and extent of woodland and buildings is derived from OS Open data and assumed heights for these are added to the bare ground model. As a result, the ZTV study does not take account of all above ground features only those included as woodland and buildings in the OS mapping at the time the ZTV was prepared. These ZTV studies present a more realistic visibility pattern than bare ground studies, but do not take detailed account of felling cycles, tree growth, demolition or construction.



### **Visualisations: Existing Views and Wirelines**

8. Baseline photography has been undertaken at each representative viewpoint location using a highquality digital SLR camera with full frame sensor and a 50mm fixed focal length lens – in accordance with the relevant guidance identified above. The resulting photos are either presented as single frame images or combined into panoramas using PTGui photo stitching software and saved as planar projection images. Single frame and panoramic images are presented at either A3 or on wide format sheets, in accordance with Technical Guidance Note 06/19, and are annotated to indicate the extent of the proposed development and highlight any important features within the view.

### Visualisations: Photomontages

- 9. Baseline photography has been undertaken at each agreed representative viewpoint location using a high-quality digital SLR camera with full frame sensor and a 50mm fixed focal length lens, in combination with a panoramic head equipped tripod at 1.5m height Above Ground Level (AGL) unless stated otherwise in accordance with the relevant guidance identified above. The resulting photos are combined into panoramas using Adobe Photoshop and/or PTGui photo stitching software and saved as cylindrical and planar projection versions for use in visualisation production.
- 10. The Autodesk 3DS Max computer model is used to generate a perspective view from each viewpoint of the proposed development, using landform in the computer model and the specified geometry and position of the proposed development.
- 11. Using the computer model, a wireline diagram showing the proposed development (and any cumulative sites as required) is generated for each viewpoint to meet the relevant requirements of guidance (e.g. blades upwards, numbered, facing the viewpoints, etc).
- 12. To produce a photomontage, the above wireline is combined with the photographic panorama using Autodesk 3DS Max and Adobe Photoshop. Detailed viewpoint information as recorded on site (e.g. GPS grid co-ordinates; ground level information; compass bearings; and any other known references; etc) is used to enable the accurate alignment of the photographs with the computer model. A perspective match is achieved between the computer generated wireline and the photographs by iteratively adjusting the parameters until all the major features in the image are aligned satisfactorily. The Proposed Development is then rendered using Autodesk 3DS Max taking into account the time and conditions occurring on the day of the photography to provide a realistic image.
- 13. A minimal amount of image processing is undertaken. Where necessary, the contrast between the background photograph and the proposed development is increased to ensure that the development is apparent in the photomontage, as far as possible. It should be noted that there is an element of professional judgement inherent in the illustration of the changes represented by any photomontage.
- 14. The information shown on the visualisations and within the LVIA is generated via the computer model or from mathematical calculations.
- 15. The completed base photography, wirelines, photomontages and accompanying data are then presented as figures using desktop publishing/graphic design software to meet the relevant guidance requirements.

### Image Verification

16. The image verification details set out in the Visualisation Standards for Wind Energy Developments have been retained. These details and the 'additional imagery' requirements of a photograph of the



tripod location and a 'composite view' showing the underlying construction of a photomontage are recorded for each viewpoint and can be provided if required for verification purposes .

### **Data Accuracy**

- 17. The Ordnance Survey (OS) provides accuracy figures for the following terrain data products expressed statistically as root-mean-square error (RMSE) in metres:
  - OS Terrain®50 (50m resolution): 4m RMSE.
  - OS Terrain®5 (5m resolution): Urban and major communication routes 1.5m RMSE; Rural 2.5m RMSE; Mountain and moorland 2.5m RMSE.



## **APPENDIX 3: VIEWPOINT ANALYSIS**

### Introduction

- 1. Viewpoint analysis has been carried out from a selection of key representative viewpoint locations to inform the assessment of the likely magnitude and significance of landscape and visual effects arising as a result of the Proposed Development.
- 2. Following desk-top analysis six viewpoints were identified and represent the main landscape and visual receptors found in the study area.
- 3. The locations of the selected viewpoints are shown on Figures 1 to 5 and Figure 7. Details for each viewpoint are provided below. Photographs, wireline diagrams and photomontages are provided to illustrate the existing view at each viewpoint location and the likely extent of the Proposed Development within the view (see Viewpoints 1-6). A summary of the viewpoint analysis is provided in the main LVA.
- 4. This viewpoint appraisal considers the nature of the predicted view and the scale of change. The wider extent of the effect (beyond the individual viewpoint considered), and its duration, are not captured in the viewpoint analysis (as a single viewpoint cannot capture extent or duration) and are considered in the main body of the appraisal. Extent and duration are factors in the overall judgement on magnitude of change, therefore judgements on magnitude of change and overall level of effect and significance are also provided in the main assessment.
- 5. The method of assessment used for the viewpoint analysis, which is described in Appendix 1, accords with current best-practice, Guidance for Landscape and Visual Impact Assessment (Landscape Institute and Institute of Environmental Management, 2013). Observations are made of the baseline landscape and visual characteristics at each of the representative viewpoints. Observations, computer modelling and professional judgement are applied to determine the scale of change attributable to the Proposed Development (Large, Medium, Small and Negligible) upon landscape character and visual amenity at each individual viewpoint in order to determine the scale of effect.
- 6. The visual assessment takes into account the screening effect of intervening landform, vegetation and built form. It assumes excellent clear weather conditions; although the influence of different seasons, weather, sunlight and visibility conditions have been considered, where relevant.



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VP	Location	Key features of existing view	Predicted Visual Change	Predicted Change to Landscape Character
1	A9, North	This view is located on a grass verge of the A9 west of the site, adjacent to a thin block of forestry on rising land to the east. Views are focussed along the road corridor in the direction of travel north or south. Views west towards the site above roadside vegetation are open across the low-level agricultural landscape and Spittal Converter Station. Two parallel 132 kV overhead lines (OHL) run across the horizontal extent of views west above a backdrop of forestry. The distant background west to northwest comprises of upland hills and distinctive peaks of Ben Dorrery and Beinn Freiceadain.	Construction: Construction activity would be a noticeable addition in sequential views west along this section of the A9. Earthworks, the construction of battery storage units, the movement of plant and materials would be visible in low-level views across agricultural fields adjacent to the Spittal Converter Station and in front of the OHL. The movement of vehicles along the site access track would be visible in close proximity to the A9 but fleeting, oblique to the direction of travel and would not break the skyline. Operation: The Proposed Development would be perceptible in low-level agricultural fields across part of the mid- range view west. The proposed battery storage units and substation would be mostly screened by the earth screening bunds. There would be glimpsed views of the roofline of a very limited number of battery storage units and switch gear infrastructure. The Proposed Development would appear below the existing 132 kV OHL, adjacent to Spittal Converter Station and read as an extension to the presence of electrical infrastructure in the view northwest. The proposed hedgerow would form a new field boundary separating the main site from the adjacent pastoral fields. Initially the earth screening bunds would appear in contrast with the existing composition until grassland has established and the scale of change would reduce. Views towards the Proposed Development would be oblique to the direction of travel, would remain below the backdrop of forestry and would not break the skyline.	Construction: Construction activities would be visible in agricultural fields within the landscape. This would be a noticeable but temporary addition within the host landscape LCT 143 Farmed Lowland Plain but contained within lower elevations against a backdrop of rising landform and pockets of forestry. Operation: The Proposed Development would be visible within the agricultural land of LCT 143 Farmed Lowland Plain. The introduction of the Proposed Development would add to the presence of electrical infrastructure concentrated around the OHL and Spittal Converter Station. Direct changes to the landscape fabric would result from the loss of two agricultural fields.



The view is located on the A9 at a roadside verge, parallel with the farm sheds and buildings at Spittal Mains. Views are focussed along the road corridor in direction of travel north or south. Views west towards the site are partially filtered by roadside vegetation to low-level agricultural fields beyond. The 132 kV OHL extends across the view interspersed with blocks of forestry and undulating fields. The distant background to the northwest comprises of upland hills including Ben Dorrery and Beinn Freiceadain.

#### Construction:

Construction activities would be visible above roadside vegetation along the access track and within the main site area. Vegetation clearance, earthworks, the movement of plant and material and the erection of battery storage units would be visible below the 132 kV OHL. Some ground-level activities would be partially screened once the earth screening bunds were constructed. Vehicle movements and plant would be visible accessing the access track from the A9. Views of construction would be fleeting, oblique to the direction of travel, below the backdrop of forestry and would not break the skyline.

#### Operation:

The Proposed Development would be visible in lowlevel agricultural fields across part of the mid-range view northwest. Boundary vegetation and proposed earth screening bunds would screen the lower-levels of the Proposed Development. There would be glimpsed views of several battery storage units and switch gear infrastructure above and between the two earth screening bunds, below the 132 kV OHL and set against a backdrop of rising fields and small blocks of forestry. The Proposed Development would appear as an extension to the corridor of electrical infrastructure that follows the 132 kV OHL. Initially the earth screening bunds would appear in contrast with the existing composition of views until grassland has established and the scale of change would reduce. Views towards the Proposed Development would be oblique to the direction of travel, would not break the skyline and would be below the backdrop of forestry.

#### Construction:

Construction activities would be visible in agricultural fields within the landscape. This would be a noticeable but temporary addition within the host landscape LCT 143 Farmed Lowland Plain but contained within lower elevations against a backdrop of rising landform and pockets of forestry.

#### Operation:

The Proposed Development would be visible within agricultural fields of LCT 143 Farmed Lowland Plain. The introduction of the Proposed Development would add to the presence of electrical infrastructure concentrated around the OHL and Spittal Converter Station. A combination of proposed earth bunds and boundary planting would aid landscape integration Once established, grassland and planting would reduce the scale of change from this location.

A9. South

2



3

to Spittal Hill

Approach

This view is located along a field boundary on route to Spittal Hill. There is no defined path to the summit. Elevated, long-range and wide-angle view extends across the agricultural landscape to more distant sweeping moorland and flows. The Spittal Converter Station, 275 kV and 132 kV OHL are noticeable features in the view west set against a gently rising landform that consists of forestry and open fields. Rotating wind turbines at Achlachan, Halsary, Causeymire and Bad a Che Wind farms are visible in more distant views southwest. Upland hills and mountains and distinctive peaks at Morven and Meall nan Con are distinctive features on the distant skyline southwest to west.

#### Construction:

Construction activities within the site and along the access track would be visible across two low-level agricultural fields to the west. Vegetation clearance, earthworks, the movement of plant and material and the erection of battery storage units would be visible below the 132 kV OHL. There would be open views of vehicle movements along the access track.

#### Operation:

The Proposed Development would be noticeable in low level part of the view west. The introduction of the Proposed Development would increase the presence of electrical infrastructure in close proximity to Spittal Converter Station and against the backcloth of the double 132 kV OHL. The height and mass of the battery storage units would appear below the rising landform and block of forestry in more distant views west. Proposed earth bunds and planting would slightly reduce the extent of infrastructure visible at ground level at the eastern extent of the battery unit platform. Once established seeding and planting would reduce the impression of change as a result of the earth screening bunds. There would be no view of the proposed Development from the summit of Spittal Hill.

#### Construction:

The full extent of construction activities would be visible in agricultural fields and along existing tracks within the host landscape, LCT 143 Farmed Lowland Plain. The scale of construction activity would be a noticeable addition across a small part of a more expansive view.

### Operation:

The introduction of the Proposed Development would result in a small change to the landscape character of LCT 143 as a result of the increase in electrical infrastructure within the context of the 132 kV OHL and Spittal Converter Station. Once seeding has established, the earth bunds would partially aid landscape integration from this location.



4	Achanarras Hill Quarry Car Park	This view is located on the core path (CA06.07) leading to Achanarras Hill Quarry. Low-level and wide-angle views are comprised of undulating rough pasture. Views north and west are contained by blocks of forestry. The 132 kV OHL corridor is a noticeable feature across the horizontal extent of the view from north to northeast. Rotating wind turbines at Achlachan and Casueymire are visible above forestry on the skyline to the south.	Construction: Views of construction activity would be screened by localised landform and a band of forestry. The movement of the tallest plant along the eastern extent of the access track would be barely discernible. There would be no view of construction within the main compound or earthworks areas. Operation: Intervening landform and vegetation would screen views of the Proposed Development at operation. There would be no discernible change in the view.	Construction: The introduction of construction activity within the landscape would result in barely discernible change in landscape character from this location. Operation: The Proposed Development would result in no perceptible change in landscape character from this location due to intervening landform.
5	Achanarras Hill Quarry	This view is located at an elevated location near the Achanarras Hill Quarry information point. Long-range and panoramic views extend across the agricultural landscape. Spittal Hill forms the rising landform to the east . The Spittal Converter Station, 275 kV and 132 kV OHLs are noticeable features within agricultural fields with smaller blocks of commercial forestry. Views south to west comprise of forestry blocks, above which rotating wind turbines at Achlachan Windfarm are visible on the skyline. The more distant background to the southwest comprises of vast undulating moorlands to distant upland mountains and distinctive peaks.	Construction: Construction activities would be visible across a small horizontal extent of the view east. Existing forestry would limit views of most construction activity to earthworks associated with the screening bunds, movement of plant along the access track and the construction of upper parts of some battery storage units. Most ground level activities within the main battery unit compound and substation would not be visible. Operation: Existing forestry would heavily screen views of the Proposed Development. The eastern earth screening bund, part of the access track and a very limited number of battery storage units would be perceptible within an agricultural field beyond intervening	Construction: Construction activity would result in a very slight change within the landscape fabric from this location. Earthworks and the movement of plant on the access track would be contained within two agricultural fields beyond intervening forestry. Most construction activity would be screened. Operation: Most of the proposed infrastructure would be screening by forestry. Where visible the Proposed Development would appear contained within existing field boundaries and landscape pattern. Over time, established planting and grassland would aid landscape integration and any change



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			forestry. The scale of change would reduce slightly once grassland on the earth screening bunds has established. There would be no view from the main information point and along the access trail to the quarry.	in landscape character would be barely perceptible.
6	Bridge Street, Yellow Moss	This view is located at a roadside verge on Bridge Street near residential properties. Expansive and long-range views east and southeast towards the site extend across flat open moorland to more distant agricultural fields and pockets of forestry. The 275 kV OHL corridor and Spittal Converter Station are visible at lower elevations. Spittal Hill is a distinguishable landform that forms the skyline with bands of established forestry and woodland. Views west extend across flat open pasture to more distant and distinctive upland hills and mountains.	Construction: Construction activities would be mostly screened by Spittal Converter Station and established forestry. The upper parts of activities associated with the erection of battery storage units and the substation at the northern edge of the site would be barely perceptible across a very small part of the view. Operation: Most of the Proposed Development would be screened by Spittal Converter Station and established forestry. The upper parts of the proposed battery storage units and the substation would not be discernible.	Construction: The introduction of construction activity within the host landscape would result in barely perceptible change to the impression of landscape character from this location. Operation: Intervening buildings and structures would screen the Proposed Development and there would be no discernible change in landscape character from this location.



### APPENDIX 4: LANDSCAPE SENSITIVITY ASSESSMENT

The sensitivity of the landscape character types which may receive notable landscape effects are assessed below. Landscape sensitivity is not absolute and can only be defined in relation to each development and its location. To assess the sensitivity of a particular landscape it is good practice to consider the value attached to the landscape and its susceptibility to the particular form of change likely to result from the proposed development. Assessment text relates to sensitivity of the landscape receptor as a whole, to the proposed development, with additional comments regarding the Site where relevant. In the main this has been taken from the NatureScot Landscape Character Assessment 2019 (quotes shown in italics) as well as from local sources and site assessment. The table below is based on guidance provided within LI TGN 02/21 - specifically Table 1 within that document.

Factors affecting sensitivity	Lower Sensitivity to Battery Energy Storage	Higher Sensitivity to Battery Energy Storage	Explanation	Judgement
Value attached to La	ndscapes			
Designated scenic quality	No specific designation	National or regional designation	There are no landscape designations within this LCT and the study area.	Community
Natural Heritage	Low presence of ecological or geological / geomorphological interest.	High presence of ecological or geological / geomorphological interest.	Achanarras Hill Quarry and Nature Reserve is a Site of Special Scientific Interest and of notable ecological interest within the study area. The quarry is of international scientific importance due to the abundance and variety of fossil fish which were originally discovered when quarrying to extract flagstone.	Regional
Cultural Heritage	Low presence of archaeology or historical interests	High presence of archaeology or historical interests	There are two Scheduled Monuments within close proximity to the site. 'St Magnus' church, burial ground and hospital' Scheduled Monument is located in the field immediately southeast of the application site. ' <i>Fairy Hillock, chambered</i> <i>cairn SE of Spittal Mains</i> ' is located approximately 0.8 km southeast of the site.	Regional

### Host Landscape: LCT 143 Farmed Lowland Plain



				npuny
Landscape condition/ quality	Landscape in a poor state of repair with incongruous elements	Landscape fully intact in good condition with limited incongruous elements	The condition of landscape elements are typical of a farmed lowland landscape. Field boundaries are generally intact and comprise of hedgerows and walls constructed of Caithness stone. Pockets of commercial forestry is at various stages of rotation with limited areas of windblow damage.	Community
Cultural associations	No strong associations with notable people, events or the arts.	Strong cultural associations with notable people, events or the arts, which contribute to perceptions of natural beauty.	There are some historic features, including brochs and cairns, dotted across farmland and situated on hills within, or adjacent to, this area.	Community
Distinctiveness	Commonplace elements and features, or the landscape itself. Lacking distinctive and strongly expressed character and with no important relationship to a settlement.	Presence of rare elements or features or rarity of the landscape itself. Landscape with a distinctive and clearly expressed character and/or with an important relationship to a settlement.	The pattern of open agricultural land and forestry are common place elements. There are some more distinctive attributes such as Caithness flagstone fences but often over grown with a combination scrub and hedgerows.	Community
Amenity and recreation	Limited amenity/recreational function where experience of the landscape is important	Well used for recreation where experience of the landscape is important; or forms part of a view that is important to a recreational experience. May contain National Trails or other long distance routes.	There are no designated routes within the study area. The core path leading to Achanarras Hill Quarry has some recreational value and is of local recognition. There are some locally known informal routes on local roads and tracks used for recreation including to the summit of Spittal Hill.	Community
Perceptual (Scenic)	Landscape with no particular scenic / visual appeal.	Landscape with strong appeal to the senses, particular visual.	This landscape is of limited scenic value. However more elevated areas such as Spittal Hill and sections of the A9 offer more expansive and greater scenic views to sweeping moorlands, flows and upland mountains beyond this landscape.	Community
Perceptual (Wildness and Tranquillity)	Busy with evidence of human activity, well-lit.	Remote, peaceful or with a sense of wildness. Dark skies.	There is a range of infrastructure including quarries, an overhead transmission line, converter station and settlements within this LCT and all within close proximity to the A9. More rural areas offer localised pockets of more remote qualities.	Community



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Function	No important blue/green infrastructure function or important relationship with national landscape designation.	Landscape with important blue/green infrastructure function or strong relationship that is important to a national landscape designation.	Green infrastructure elements include a network of hedgerows with some pockets of more recent moorland habitat restoration associated with Achanarras Hill Quarry Nature Reserve.	Regional/ Community	
Overall Judgement of Value					

Susceptibility				
Scale	Large scale landscapes where the infrastructure may be in proportion with the landscape are generally less sensitive.	Small scale intimate landscapes are generally more sensitive to large scale structures.	Landscape features comprise of blocks of forestry, medium scale, open agricultural landscape reinforced by field boundaries and scattered buildings.	Medium
Landform	Smooth regular flowing, flat or uniform landscapes	Dramatic, rugged and complex landscapes	A generally open, low-lying plain, gently undulating to form shallow broad valleys, which are often filled with lochs and mosses, and subtle low ridges. Occasional smooth hills rise above the more low-lying plain forming local landmarks.	Medium
Openness/enclosure	Open and exposed landscapes	Enclosed and sheltered landscapes	Open farming landscape with some plantation forestry that enclose parts of the landscape within the context of the site to the west. More elevated landform within eastern part of the study area are more open and exposed.	Medium/Low
Land cover	Extensive areas of simple or regular landcover (including intensive farming and forestry)	Complex, intimate or mosaic cover	<i>Agriculture the predominant land cover.</i> More intensively farmed within the study area with larger blocks of forestry immediately west of the site.	Low
Complexity and patterns	Simple and sweeping lines, linear feature and patterns	Complex or irregular patterns	Relatively simple with regular field shapes in are part defined by hedgerows and flagstone fences.	Low
Built Environment	Contemporary masts, pylons, industrial elements, buildings infrastructure, settlements	Established, traditional or historic built character	Roads reinforce the settlement pattern, often following the field and property boundaries, running straight and then swinging around sharp corners.	Low



			The A9 in particular reinforces the settlement pattern in the study area. The single 275 kV overhead line and the double 132 kV overhead lines run in parallel through the study area and connect to Spittal Converter Station are notable features in this landscape.	
Views intervisibility	Visually contained and have limited inward or outward views	Extensive views within or of the area with distant horizons.	Views within the central part of the study area are contained within the lower elevations and where there are blocks of forestry. There are more expansive views from Spittal Hill, Achanarras Hill Quarry and along the A9 towards the southern edge of the study area.	Medium
Landscapes that form settings, skylines, backdrops, focal points	Generally low lying landscapes without distinctive landform or horizon	Areas with strong features, focal points that define the setting or skyline	The landscape within the core of the study area is low lying and landform is not particularly distinctive. There are more distant upland mountains southwest beyond this LCT and feature in views from more distant and elevated areas in the eastern part of the study area.	Medium
Overall Judgement of Susceptibility				
Overall Judgement of Sensitivity				