5.0 Landscape and Visual Appraisal

5. Landscape and Visual Appraisal

5.1. Introduction

5.1.1. This Landscape and Visual Appraisal (LVA) has been conducted by Chartered Landscape Architects at SLR Consulting Limited (SLR) on behalf of Boralex Limited to evaluate the potential effects on the landscape and visual resource associated with the construction, operation and decommissioning of the Battery Energy Storage System (BESS) and Substation Extension (the Proposed Development), associated with the operational Limekiln Wind Farm, south of Reay in Caithness. The LVA has been directed by James Welch FLI BA Hons, Chartered Landscape Architect and Director at SLR.

5.1.2. The purpose of the LVA is to provide a landscape appraisal, which outlines the existing landscape and visual baseline and appraises the landscape and visual effects of the Proposed Development, to inform the material planning considerations in the determination of a Section 36 application.

5.1.3. A formal Screening Opinion under Regulation 8 of The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 was submitted to the Energy Consents Unit (ECU) on 22 April 2025. The Screening Opinion received from the Energy Consents Unit on 6 June 2025 confirmed that an Environmental Impact Assessment was not required. A supporting Planning Statement has been prepared by David Bell Planning and submitted alongside this LVA. This covers the key planning policies and considerations relevant to the Proposed Development and its consideration.

5.1.4. The LVA considers effects on the landscape resource and the visual amenity within the study area (Figure 5.1). Cumulative effects arising from the addition of the Proposed Development to other large scale energy infrastructure are also considered. The specific objectives of the chapter are to:

- describe the landscape and visual baseline;
- describe the appraisal methodology and criteria used in the appraisal of effects;
- describe the potential effects, including direct, indirect, and cumulative effects;
- describe the mitigation measures proposed to address likely landscape and visual effects; and
- assess the residual effects remaining following the implementation of mitigation.

5.1.5. This Chapter is supported by the Technical Appendix (TA) listed below which is referenced throughout the Chapter.

- Appendix 5.1: Appraisal Criteria

5.1.6. The LVA is also supported by the following set of figures and visualisations, which contain GIS maps, photographs, and photowires to illustrate various aspects of the LVA. These figures have supported the professional judgement that is applied within the appraisal:

Appendix 5.2

- Figure 5.1 - Site Location and Context
- Figure 5.2 - Bare Earth Zone of Theoretical Visibility (ZTV) plan
- Figure 5.3 - Screened Zone of Theoretical Visibility (ZTV) plan
- Figure 5.4 – Landscape Character Types with Screened ZTV overlaid
- Figure 5.5 – Landscape Designations with Screened ZTV overlaid
- Figure 5.6 – Visual Receptors with Screened ZTV overlaid

Appendix 5.3

- Figure 5.7 Viewpoint 1 - CA11.03 Limekiln Forest Core Path (Substation Extension)
- Figure 5.8 Viewpoint 2 - CA11.03 Limekiln Forest Core Path (BESS compound)
- Figure 5.9 Viewpoint 3 - Beinn Ratha
- Figure 5.10 Viewpoint 4 - Borlum Hill
- Figure 5.11 Viewpoint 5 - Reay Footpath
- Figure 5.12 Viewpoint 6 - Shebster
- Figure 5.13 Viewpoint 7 - Clach Clais an Tuirc (Cultural Heritage viewpoint only)

5.1.7. The Zone of Theoretical Visibility (ZTV) illustrations have been produced on two different bases to inform the appraisal. In common with normal practice, a bare earth ZTV has been prepared to illustrate the worst case situation. This illustration takes no account of the existing forestry screening that exists in the Limekiln Forest and adjoining plantations, which in reality will provide a degree of screening to both the Substation Extension and BESS compound.

5.1.8. To capture this screening, a screened ZTV has also been prepared which models existing forestry at a height of 10 m and assumes this is present in the terrain model. The forestry on the Site has been modelled having regard to the Forestry Management Plan, including the removal of all felling planned in Phases 1 and 2, up to 2027 (which includes recent felling to accommodate the wind farm). This provides the most realistic impression of the likely screening that will be derived from retained forestry on the Site. It is evident from the screened ZTV that visibility of the Proposed Development will be substantially contained by surrounding forestry, which reflects SLR's assessment on the ground, during fieldwork.

5.2. Proposed Development

5.2.1. A full description of the Proposed Development is set out in the Environmental Report (ER) Chapter 3, with a summary provided here to provide context to the LVA.

5.2.2. The Proposed Development Site ('the Site') is located within the footprint of the operational Limekiln Wind Farm, south of Reay, Caithness within the administrative boundary of The Highland Council. The Site consists of a combination of operational wind farm infrastructure and actively managed commercial forestry, as shown on Figure 5.1 in Appendix 5.2.

5.2.3. The overall Site area is approximately 32 hectares (ha) with access taken from the A836, utilising the existing wind farm access tracks. The Site is rural in nature with a small number of neighbouring residential properties. The nearest residential properties include Borlum House, Milton and Loanscorribest, which are approximately 2 km north of the Proposed Development.

5.2.4. A Core Path (ref CA11.03-Limekiln Forest) passes alongside the proposed BESS site, which would be situated on the reinstated temporary construction compound which was used for Limekiln wind farm. Existing wind farm tracks would be utilised therefore no new access tracks would be required for the Proposed Development. The battery storage units would be located within a compound measuring approximately 115 m by 80 m which would be formed of crushed rock laid on permeable membranes. The maximum height of any structure within the facility would be approximately 4 m. Lighting would be provided on site including lighting to the 4 m CCTV columns and lighting on the units within the facility. The lighting would be motion sensor activated.

5.2.5. The proposed Substation Extension would sit immediately adjacent to the operational Limekiln Wind Farm Substation, wrapping around its northern edge as shown in Figure 5.1. The tallest elements in the Substation Extension would be 7.5 m tall, which is consistent with the operational Substation infrastructure.

5.2.6. The Substation Extension would be connected to the BESS facility by way of an underground cable running alongside the Core Path.

5.2.7. The photowires that are provided in Appendix 5.3 illustrate the proposed Substation Extension and BESS compound as separate three-dimensional boxes, accurately representing the maximum parameters of the development in both locations. The photowires do not attempt to illustrate the actual appearance of these elements but enable an opinion to be formed on the likely visibility and magnitude of change that will occur at each viewpoint.

5.3. Scope of the Appraisal

5.3.1. The appraisal covers the potential landscape and visual effects of the Proposed Development during its construction phase and operational phases. A study area of 5 km buffered from the Proposed Development has been defined as the basis of this LVA (the 'Study Area'). The extent of the Study Area has been informed by professional experience of similar development, previous work undertaken for this scale of development and landscape character and terrain. Consideration of any evolving cumulative context is included throughout the appraisal, where relevant.

Methodology

5.3.2. The LVA methodology draws upon the established guidance in the Landscape Institute's Guidelines for Landscape and Visual Impact Assessment (GLVIA), 3rd edition 2013, the LI Technical Guidance Note LITGN-2024-01 (August 2024) and previous experience of undertaking similar appraisals. Appendix 5.1 sets out criteria for the appraisals of sensitivity and magnitude of change of the landscape and visual receptors identified in the LVA, and for the appraisal of levels of effect.

5.3.3. The following extract, taken from the GLVIA 3 gives guidance on the terminology to be used in non-EIA Landscape and Visual Impact Appraisals, such as this LVA:

'*In carrying out appraisals, the same principles and process as LVIA may be applied but, in so doing, it is not required to establish whether the effects arising are or are not significant given that the exercise is not being undertaken for EIA purposes. The reason is that should a landscape professional apply LVIA principles and processes in carrying out an appraisal and then go on to determine that certain effects would be likely be significant, given the term 'significant' is enshrined in EIA Regulations, such a judgement could trigger the requirement for a formal EIA. The emphasis on likely 'significant effects' in formal LVIA stresses the need for an approach that is proportional to the scale of the project that is being assessed and the nature of its likely effects. The same principle - focussing on a proportional approach – also applies to appraisals of landscape and visual impacts outside the formal requirements of EIA.*'

5.3.4. In this LVA, effects are appraised to be either 'negligible', 'minor', 'minor-moderate', 'moderate' 'moderate-major', or 'major.' The level of effect is appraised through a combination of two considerations - the sensitivity of the landscape element, landscape character receptor or visual receptor, and the magnitude of change that would result from the Proposed Development. This evaluation is carried out for each of the receptors described within the baseline section of the report, with the exception of those receptors that are scoped out of detailed appraisal.

Categories of Effect

5.3.5. In the appraisal, the potential effects of the removal and addition of elements within the landscape that are associated with the Proposed Development are considered in relation to effects on landscape elements, landscape character and visual amenity.

5.3.6. Effects on landscape elements are restricted to the area within the Site boundary and are direct effects upon the fabric of the Site. Landscape elements are components of the landscape such as hedgerows, or woodland that may be physically affected by the Proposed Development.

5.3.7. Effects on landscape character arise either though the introduction of new elements that physically alter the pattern of elements that makes up landscape character, or through visibility of the Proposed Development, which may alter the way in which the pattern of elements is perceived. This category of effects is made up of landscape character receptors which fall into two groups: landscape character types and areas covered by a landscape planning designation.

5.3.8. Effects on visual amenity is an appraisal of how the Proposed Development will affect the views of residents, recreational users, and road users around the Site. The appraisal of effects on visual receptors is informed by six viewpoints that have been selected to represent the visibility for the Proposed Development from the visual receptors around the Study Area. Further information on these viewpoints is provided in the baseline section of this appraisal.

Appraisal of the Levels of the Effect

Sensitivity

5.3.9. Sensitivity is an expression of the ability of a landscape or visual receptor to accommodate the Proposed Development. The sensitivity is determined through a combination of the value of the receptor, and the susceptibility of the receptor to the Proposed Development.

5.3.10. Levels of sensitivity - high, medium to high, medium, medium to low, low, and negligible are applied in order that the judgement used in the process of appraisal is made clear. The criteria used to determine sensitivity differ for the effects on landscape elements, landscape receptors and visual receptors. These criteria are explained in full in Appendix 5.1.

Magnitude of Change

5.3.11. Magnitude of change is an expression of the extent of the effect on the landscape and visual receptors that will result from the introduction of the Proposed Development. The magnitude of change is appraised in terms of the size and scale of the effect. The geographical extent of the area influenced is described in relation to the magnitude of change.

5.3.12. Levels of magnitude of change - high, medium to high, medium, medium to low and low - are applied in order that the judgement used in the process of appraisal is made clear. The criteria used to determine magnitude of change differ for the effects on landscape receptors and visual receptors, as well as any cumulative effects on both. These criteria are explained in full in Appendix 5.1.

Level of Effect

5.3.13. To ascertain the level of effect, the sensitivity rating is combined with the magnitude of change rating, through the application of professional judgement to conclude whether the level of the effect is major, moderate, or minor or sits between these thresholds as outlined above. A major effect occurs where the Proposed Development would provide a defining, or material, influence on a landscape element, landscape character receptor or visual receptor. A minor effect occurs where the effect of the Proposed Development is not material, and the baseline characteristics of the landscape element, landscape character receptor, or visual receptor continue to provide the definitive influence. A moderate effect occurs where the Proposed Development has a notable influence on a landscape element, landscape character receptor or visual receptor, but where the baseline characteristics continue to provide the definitive influence.

5.3.14. It is relevant to emphasise that a non-EIA appraisal should not form any conclusions around the significance of any environmental effects, as to do so may trigger a requirement for an EIA level assessment.

Guidance

5.3.15. The LVA follows the Appraisal Criteria set out in Appendix 5.1 devised specifically for the assessment of energy developments, which is in line with the 'Guidelines for Landscape and Visual Impact Assessment: Third Edition' (Landscape Institute and IEMA, 2013) ('GLVIA3'), the key source of guidance for LVIA and LVA.

5.3.16. Other sources of guidance used and referenced in the LVA include the following:

- Landscape Institute (2019). Visual Representation of Development Proposals: Landscape Institute Technical Guidance Note 06/19.
- Landscape Institute (2019). Technical Guidance Note 2/19 Residential Visual Amenity Assessment.
- Landscape Institute (2021). Technical Guidance Note 2/21 Assessing landscape value outside of national designations.
- Landscape Institute, Technical Guidance Note LITGN – 2024-01 (GLVIA3 Clarifications), Published August 2024.
- NatureScot (2017). Visual Representation of Wind Farms Version 2.2.
- NatureScot (2021). Assessing the Cumulative Impact of Onshore Wind Energy Developments.
- NatureScot (2020). Assessing Impacts on Wild Land Areas Technical Guidance.
- NatureScot (2017). Siting and Designing of Windfarms in the Landscape: Version 3a.

5.4. Landscape and Visual Baseline

5.4.1. The baseline study records the existing conditions of the Site and Study Area, and includes an evaluation of which receptors should be carried forward to a detailed appraisal on the basis of the potential for material effects arising from the Proposed Development. The process enables an understanding of the baseline characteristics of the Site, outlining what it is that makes the Site and surroundings distinctive as well as describing the important components or characteristics which comprise the existing landscape and how strongly they are represented across the Site and wider Study Area. It is instrumental in the identification of the landscape elements, landscape designations, landscape character types and visual receptors which are included in the subsequent appraisal.

5.4.2. The baseline study is presented in five sections:

- The Proposed Development Site and Wider Context
- Landscape Character
- Landscape Planning Designations and Wild Land
- Principal Visual Receptors and Viewpoints, and
- Future Baseline.

5.4.3. In each section of the baseline description, receptors are screened in relation to the likelihood of material landscape and visual effects arising from the Proposed Development and, applying Professional judgement, are either scoped-in or scoped-out of the appraisal of effects. This is to provide a proportionate appraisal that focuses on relevant considerations for planning purposes.

Field Survey

5.4.4. To inform the LVA, field survey was undertaken in April and July 2025. Viewpoint photography was captured during field survey visits in periods of good visibility. Field surveys were carried out throughout the study area, although surveys were concentrated within the areas shown on the ZTV to gain theoretical visibility of the Proposed Development.

5.4.5. Field survey included visits to viewpoints as well as travel around the study area to consider potential effects and cumulative effects on landscape character and on the experience of views seen from travel routes through the landscape. Field survey has allowed the landscape character and the visual amenity of the study area to be experienced in a range of different conditions. The field survey allows the assessors to judge the likely scale, distance, extent, and prominence of the Proposed Development directly.

5.4.6. The landscape of the Site was assessed for any particular features that contribute to the landscape character of the Site or are important to the wider landscape setting. The landscape character types for the study area were reviewed and the key characteristics of the landscape were identified. The field surveys provided an experience of the character

types of the study area and verification of how these areas might be affected by the Proposed Development. Visual amenity was surveyed including both static and sequential views, from receptors representative of the range of views and viewer types likely to experience the Proposed Development. Views from a variety of distances, aspects, elevations, and extents were included. Receptor types include settlement; recreational routes; transport routes; hilltops; visitor locations; areas of cultural significance; a range of landscape character types; and landscape designations.

The Site and Wider Context

5.4.7. The Proposed Development Site is situated in Caithness, approximately 12 km west of Thurso and 2 km south of the North Atlantic coast. It is located within a large coniferous woodland plantation known as Limekiln Forest, where Limekiln Wind Farm has recently become operational. The underlying landform comprises relatively low and gently undulating hills characteristic of the wider Sweeping Moorland and Flows LCT. Limekiln rises from 50 m AOD along the northern boundary to 200 m AOD along the southern boundary, while the site of the BESS is at approximately 85 m AOD. The wider landform follows a south to north alignment marked by the orientation of the low hill ridges and intermediate valleys with the flow of the water courses north toward the Atlantic Ocean. The Site in relation to the LVA Study Area is shown on Figure 5.1 in Appendix 5.2.

5.4.8. There is a central ridge which runs through Limekiln, connecting the high points at Cnoc an Fhraoich (approx. 180 m AOD) and Cnoc an Airigh (approx. 140 m AOD). Reay Burn and Sandside Burn lie to the west of the central ridge and Achvarasdal Burn lies to the east. Smaller burns form tributaries flowing down into the shallow valleys of the larger water courses. One small lochan occurs along the ridge close to Cnoc nan Airigh, with bigger lochs occurring in the forestry to the east of the Site. The most distinctive landform feature is a small knoll, Creag Leathan, which sits at the northern end of Limekiln. The slightly steeper slopes and conical form make it apparent in views from the settlements and roads to the north. Borlum Hill which lies to the north of Limekiln forms a similar but smaller knoll, along with other smaller knolls along this northern edge.

5.4.9. The land is currently used for commercial forestry and wind farm development, with unforested areas only occurring through planned felling across the upper slopes of Creag Leathan and where key holes and strips have been removed for the construction of wind turbines and their access tracks. Wind farm and forestry tracks cut through the forest cover, encircling the central ridge and extending south to the disused property at Gleann Dubh. A Core Path (ref Limekiln Forest CA11.03) follows a circular route within the plantation, leaving and entering the forest at the northern edge close to the operation Limekiln Wind Farm Substation. The Core Path is a relevant consideration as it passes close to both the proposed Substation Extension and BESS compound sites, the latter which sits on an area of ground which was a construction compound for the Limekiln Wind Farm during construction and which has been cleared of vegetation.

5.4.10. A ridge of slightly higher hills wraps around the west and the south of Limekiln with high points at Beinn Ratha, 242 m AOD, to the west and Beinn nam Bad Mor, 290 m AOD, to the south. The landscape in these directions comprises open sweeping moorland which is characterised

by the relatively low and gently undulating landform and distinct absence of development, other than the occasional track and occasional abandoned buildings.

5.4.11. To the north of Limekiln Forest the landscape comprises improved agricultural land and small settlements. The small settlement of Reay is situated along the main north coast road (A836) and other individual properties are scattered along this northern edge. The Dounreay Nuclear Power Plant lies to the north-east, situated on the coast with its domed building forming a distinctive landmark feature. To the east, the predominance of agricultural land, along with the extent of small settlements, isolated farm steads and minor roads, establish the rural and settled nature of this landscape. Large scale development occurs at Baillie Hill Wind Farm, 4.5 km to the north-east and Forss Wind Farm, 8.3 km to the north-east, where the turbines form a distinct focus in the landscape.

5.4.12. The BESS compound will be located on the reinstated temporary construction compound previously utilised for the construction of Limekiln Wind Farm, and the Substation Extension will be located adjacent to the existing substation located in an area of clear-felled forestry. Access to the BESS and Substation Extension will use existing wind farm tracks. This approach will reduce the disturbance to the existing soils and landcover. The physical effects on the Site will, therefore, only relate to the loss of soils and vegetative cover associated with the northern part of the Substation Extension. This will involve the removal of a very small area of coniferous plantation in an area subject to a continuous cycle of clear felling and restocking.

5.4.13. The effect of the loss of this small area of clear-felled forestry where the northern part of the Substation Extension will be located, will not lead to a material or defining effect to the fabric of the Site.

5.4.14. Direct landscape effects on the fabric of the Site are therefore scoped-out from the detailed appraisal.

Landscape Character

5.4.15. The landscape appraisal considers the effect of the Proposed Development on the Landscape Character Types (LCTs) within the Site and the surrounding area. In early 2019, NatureScot published an update to the characterisation of Scotland's landscape as a digital resource. The information builds on the characterisation studies published in the 1990s. NatureScot describes this 2019 characterisation as superseding the 1990s landscape character descriptions and mapping. NatureScot's 2019 Character Assessment forms the most up to date characterisation study for the Site and study area and its landscape character boundaries and descriptions of key landscape characteristics form the basis of character assessment in this LVIA. The LCTs found in the study area are shown on Figure 5.4 in Appendix 5.2.

5.4.16. The two LCTs that may be considered relevant to the appraisal are the Sweeping Moorlands and Flows LCT (LCT 134), in which the Site is located, and the Farmed Lowland Plain LCT (LCT 143), which lies to the immediate north of Limekiln Forest. The other LCTs in the study area will not be affected owing to their separation distance from the Proposed Development,

the relatively small scale of the Proposed Development and the screening effect of the coniferous plantation.

5.4.17. The Sweeping Moorland and Flows LCT covers an expansive area stretching from Strath More in the west, to the east coast at Wick, and from Strath Fleet in the south, to the north coast at Reay. The Sweeping Moorland and Flows LCT is generally characterised by the broad expanse of open moorland, with one of its key characteristics described as follows; '*a strong sense of remoteness is associated within the largely uninhabited, inaccessible core flows and moorlands of this landscape'*. NatureScot's description also recognises the variation in character that occurs across an expansive LCT with the following statement; '*coniferous forestry has a strong presence in some areas, particularly the more modified outer fringes, interrupting the continuity of the moorland cover.*'

5.4.18. The Proposed Development is located in the Limekiln coniferous plantation on the northern fringe of the LCT. This area is characterised by the enclosure of forestry in contrast to the openness of the core flows and moorland. Furthermore, along with the operational Limekiln Wind Farm, the rotational felling and restocking presents a heavily managed and modified landscape in contrast to the natural landscape of the flows. Limekiln Wind Farm makes large-scale energy development an established feature of the baseline character.

5.4.19. The Farmed Lowland Plain LCT occurs to the immediate north of Limekiln and extends towards the northern coastline. Despite the relative proximity of this LCT to the Proposed Development, the screening effect of the intervening landform and coniferous plantation, as demonstrated by the screened ZTV in Figure 5.3, combined with the relatively small scale/ low lying nature of the Proposed Development and the baseline influence of existing development (including Limekiln Wind Farm and the settled northern coastline), will prevent material effects on landscape character within the Farmed Lowland Plain from arising. This has been verified through fieldwork and on this basis LCT 143 is scoped-out from the detailed appraisal.

5.4.20. The only relevant landscape character type for consideration in the appraisal is:

- Sweeping Moorlands and Flows LCT (LCT 134)

Landscape Planning Designations and Wild Land

5.4.21. The Site and its surroundings lie well separated from any national or local landscape designations. The closest designation to the Site is the regionally valued Farr Bay, Strathy and Port Skerra Special Landscape Area (SLA) which lies approximately 8 km to the north-west of the Site, while the Dunnet Head SLA lies over 20 km to the east. It is considered that no effects on the special landscape qualities of these designations will arise owing to a combination of the substantial separation distances, the relatively small scale and height of the Proposed Development and the enclosure of the Site by localised landform features and coniferous plantation.

5.4.22. Landscape Planning Designations have therefore been scoped-out from the detailed appraisal.

5.4.23. East Halladale Flows Wild Land Area (WLA) is a mapped interest, the northern part of which lies approximately 1.7 km to the west of the Site, as shown on Figure 5.5. The effect of the Proposed Development on the defined wildness qualities of this WLA will be substantially moderated by the screening effect of the coniferous plantation, the presence of the Limekiln Wind Farm and the associated wind farm and forestry tracks. This context will moderate the influence of the Proposed Development and will limit the effects on the East Halladale Flows WLA. Furthermore, National Planning Framework 4 (NPF4) advises in Policy 4(g), in relation to Wild Land, that "*Buffer zones around wild land will not be applied, and effects of development outwith wild land areas will not be a significant consideration.*"

5.4.24. On this basis, effects on the East Halladale Flows WLA have been scoped-out from the detailed appraisal.

Principal Visual Receptors and Viewpoints

Zone of Theoretical Visibility (ZTV) Analysis

5.4.25. Two different types of ZTV have been prepared to inform the Appraisal. A bare ground ZTV in Figure 5.2 demonstrates the worst-case basis of visibility of the Proposed Development by taking no account of any physical features within the Study Area other than the landform profile. As the Site occupies a commercial forestry plantation, it is considered that the bare ground ZTV overstates the likely visibility of the Proposed Development. To address this a screened ZTV has been prepared (Figure 5.3) which includes an Ordnance Survey dataset of existing trees and forestry within the Study Area, which is included in the terrain model. A nominal height of 10 m has been attributed to this dataset to provide an indication of the potential screening that may be derived from existing trees and forestry. The forestry dataset within Limekiln Forest has been adjusted to reflect the programme of felling that has recently taken place and it also assumes that all trees projected for felling up until 2027 (Phases 1 and 2) will be removed, as shown on Figure 5.1. This represents some significant areas of the southern part of Limekiln Forest and the screened ZTV therefore presents a cautious reflection of likely screening, by removing both of these phases.

5.4.26. The screened ZTV is shown with the representative viewpoints marked up on Figures 5.3 and alongside landscape character, designations and visual receptors on Figures 5.4 to 5.6. The landform of the Site and surrounding area, combined with the extensive forestry cover, has a notable influence on the extent of visibility across the wider study area and the pattern of theoretical visibility is consequently limited in geographical extent, as shown in Figure 5.3. At close range (within 1-2 km), visibility is substantially contained by the Limekiln Forest, with the exception of close range views from the Core Path that passes the existing substation and proposed BESS compound site. Beyond the 2 km range, medium to low levels of visibility are present on elevated ground lying to west of the Site (as shown in the visualisations at viewpoints 3 and 5), with very limited areas of visibility arising to the east, with the exception of a small patch of visibility on Hill of Shebster.

5.4.27. Supporting photowires have been prepared to illustrate how the views from representative viewpoints may change and they also help to illustrate where the Proposed Development will be screened by intervening landform and/ or vegetation. The presence of and notable absence of visibility of the operational Limekiln Wind Farm Substation provides a helpful

reference or benchmark to demonstrate the high degree of containment afforded to the Proposed Development.

Settlements and Residential Properties

5.4.28. While settlements are relatively limited in the Study Area due to the remote nature of the hinterland, there are some villages and rural clusters along the coastal edge where views from them may be affected by the Proposed Development. Settlements in the study area are shown on Figure 5.3 and include Reay, Isauld and Shebster at approximately 2 km to 3 km from the Proposed Development. These separation distances, combined with the screening effect of the localised landform undulations and coniferous plantation, as well as the relatively small scale and height of the Proposed Development, make visibility highly unlikely as demonstrated by the very limited ZTV shading across these communities shown in Figure 5.3. Despite the limited potential that residents or visitors in these settlements will be affected by the Proposed Development, viewpoints have been included south of Reay and towards Shebster to illustrate the constrained nature of visibility.

5.4.29. In addition to the small settlements in the north of the study area, there are also a small number of closer range residential properties including Achins and Borlum House at distances of approximately 2.1 km and 2.4 km respectively. The extent of intervening coniferous plantation between the Proposed Development and these properties will also make visibility highly unlikely such that the views and visual amenity of residents are unlikely to be affected by the Proposed Development.

Transportation Routes

5.4.30. There are a number of routes, including roads, cycle routes and walking routes, passing though the Study Area, from which views may be affected by the Proposed Development. The A836 is the main coastal route (also designated as the North Coast 500 route), which follows a west / east direction through the north of the study area, passing through Reay and Isauld. A minor road branches off the A836 towards Shebster which allows more open views across to the Limekiln Forest, although visibility of the Proposed Development is contained by the forest plantation, while to the south, there are very few roads owing to the remote and undeveloped nature of the landscape within the WLA.

5.4.31. The routes included in the appraisal are listed below, and the potential visual effect of the Proposed Development on each of them is appraised. The routes are shown in Figure 5.6.

Recreational Routes and Core Paths

5.4.32. Figure 5.6 shows the extent of Core Paths in the Study Area. The principal route of relevance to the appraisal is the Core Path circuit through Limekiln Forest (CA11.03), together with its connecting routes into the village of Reay. Three representative viewpoints have been identified to represent people using these routes (Viewpoints 1, 2 and 5). The Core Path through the forest currently passes close to a number of Limekiln Wind Farm wind turbines as well as the operational substation at the north west end of the Application Site. The experience for users of this circular route is already heavily influenced by energy infrastructure and the introduction of the BESS compound (on a site used as a temporary

construction compound for the wind farm) will further intensify this experience. THC indicated in its Pre Application response that an interpretation board alongside the BESS site could be beneficial where it provided information about the BESS process, and how this interfaces with the wind farm. The Applicant is willing to provide this facility and suggests a Planning Condition is prepared to provide for it.

5.4.33. Other local recreational routes in the Study Area include informal walking routes to the summits of Beinn Ratha (Viewpoint 3) and Borlum Hill (Viewpoint 4). It is also the case that the minor road network shown on Figure 5.6, including the popular North Coast 500 route, is likely to be used for informal recreation, including cycling. There is very limited visibility of the Proposed Development from these routes.

5.4.34. Six viewpoints for the landscape and visual appraisal have been selected following site based analysis, and with prior knowledge of the area from undertaking the LVIA for the Limekiln Wind Farm application. The viewpoints used in the appraisal have been selected to cover points of specific importance such as recognised viewpoints, settlements, important routes, and attractions, and to inform the definition of the likely extent of visual effects arising from the Proposed Development. A variety of visual receptors from different compass directions and distances have also been represented in the selected views.

5.4.35. The table below lists the viewpoints and provides information on their location, the receptors which may experience views at these locations, viewpoint distance, elevation, and view direction to the Proposed Development. Viewpoint locations are shown in conjunction with the bare earth and screened ZTVs in Figures 5.2 and 5.3. Photowire visualisations have been prepared for these viewpoints (Appendix 5.3) to meet the requirements of NatureScot's visualisation standards (Visual Representation of Wind Farms Version 2.2, December 2017).

LVA Viewpoints

VP No	VP Name	Grid Ref		Receptor Type / LCT / Designation	Distance to BESS / Substation
1	CA11.03 Limekiln Forest (Substation Extension)	297545E	962761N	Walkers	0.04 km
2	CA11.03 Limekiln Forest (BESS compound)	298291E	961870N	Walkers	0.24 km
3	Beinn Ratha	295425E	961306N	Walkers	2.58 km
4	Borlum Hill	297438E	963524N	Walkers	0.76 km
5	Reay Footpath	296198E	964088N	Walkers / Residents	1.93 km
6	Shebster	299313E	964815N	Residents / Road-users	2.63 km

Cumulative Interactions

5.4.36. This Appraisal considers the likely cumulative effects of the Proposed Development in addition to other relevant energy related development. Given the limited geographical influence of the Proposed Development on the surrounding area, the principal cumulative interaction will take place with the operational Limekiln Wind Farm and its existing substation infrastructure.

5.4.37. The operational wind farm and its infrastructure has a significant influence on the immediate character of the Limekiln Forest and surrounding area, as is expected for a development of that scale and extent. In contrast, the proposed Substation Extension will represent a modest and direct extension to the existing Substation, which will only slightly increase its presence in the forest. The vertical height of the Substation Extension (at a maximum height to the top of the buzz bars of 7.5 m) will be discernibly lower than, and contained by, the surrounding forestry.

5.4.38. At 4.0 m to its highest point, the proposed BESS compound will occupy a separate location within the Forest and will marginally increase the presence of energy infrastructure, adding only slightly to the overall combined influence of the operational wind farm.

5.4.39. These cumulative changes will principally be experienced from within the Limekiln Forest, and most likely by users of the circular Core Path network as they move sequentially through the Forest. It is considered unlikely that changes proposed will have a material cumulative effect on how the local landscape character in LCT 134 is perceived, except at close range from within the Limekiln Forest. On this basis, an appraisal of the likely cumulative effects on the NatureScot landscape character types is scoped out from the Appraisal. Cumulative visual effects are considered within each of the Viewpoint appraisals.

Future Baseline

5.4.40. In order to ensure that the Proposed Development is appraised against a realistic baseline scenario, i.e. what the baseline conditions are likely to be once the Proposed Development is operational, a description of the likely future baseline conditions is provided within this section.

5.4.41. The main driver of future change in respect of the landscape and visual resource is climate change. Aspects that may cause change are likely to take two forms; measures to mitigate against the adverse effects of climate change and measures put in place to try and limit the future effects of it. The most evident land use change likely to occur in the Highlands will be the further development of renewable energy in the form of offshore and onshore wind farms, tidal and wave power projects and associated infrastructure including substations and BESSs.

5.4.42. In the absence of the Proposed Development proceeding on the Site, the land will most likely be reinstated from the construction compound of the Limekiln Wind Farm and returned to forestry plantation. There are currently no other wind farm developments within close proximity to the Proposed Development, there are however further applications within the wider Caithness area. The need for further renewable energy development to achieve net zero carbon emission targets may also result in a need for further grid infrastructure development to connect to the national grid and consumers. Whilst it is acknowledged that

there is anticipated to be some change in the future baseline, the LVA has not appraised these changes due to the uncertainty surrounding the nature, type and timing of changes to the baseline, as well as the localised nature of the effects of the Proposed Development.

5.4.43. A more predictable change to the future baseline is likely to arise through the progressive felling and replanting of commercial forestry within the Limekiln Forest, as the Forestry Management Plan is implemented. The screened ZTVs take a precautionary approach by removing all of the Phase 1 and Phase 2 projected felling to 2027 from the terrain model, but it is likely that further change will result in future years as other coupes are removed and replanted. The Management Plan is submitted alongside the Application for information, to show how the long term management of the forest may alter the future baseline on the Site.

5.5. Potential Landscape and Visual Effects

5.5.1. The effects of the construction, operation and decommissioning of the Proposed Development on the landscape and visual resource would arise principally from the construction and operation of the BESS compound and Substation Extension. The temporary construction compound and delivery vehicles would also have effects on the landscape and visual resource during the anticipated 6-12 month construction period of the Proposed Development. The operational lifespan of the Proposed Development is indefinitely (allowing for replacement of the BESS batteries every 15 years or so). In the event that it is decommissioned at some point in the future, it is understood that this process would take approximately 12 months and involve activities similar in nature to that of construction, resulting in similar effects.

5.5.2. Due to the relatively small scale of the Proposed Development, there is the potential that the effect during the construction (and decommissioning) phases could give rise to a greater magnitude of change than the operational phase. The effects of the construction and operational phases are, therefore, considered separately. Furthermore, as the construction and decommissioning effects are likely to be similar in nature and give rise to a similar magnitude of change, the appraisal for the construction phase also covers the assessment for the decommissioning phase.

5.6. Mitigation

5.6.1. The design process for the layout of the Proposed Development is a vital part of the environmental process and is where the biggest contribution can be made to mitigate potential landscape and visual effects, creating a development which is appropriate for the existing landscape character and visual features of an area. The design of the Proposed Development has evolved as part of an iterative process which has aimed to provide a satisfactory design solution taking account of environmental, technical and economic constraints and landscape and visual mitigation measures have been a central consideration in this iterative design process. The siting of the Proposed Development within the core of the Limekiln Forest has been intentional to secure embedded mitigation. All of the effects appraised in the LVA should be considered residual.

Mitigation of Physical Landscape Effects

5.6.2. Ground disturbance will be minimised by the location of the BESS, on the former site of the Limekiln Wind Farm construction compound and the use of the existing wind farm tracks to access both the BESS and Substation Extension. Soil materials excavated would be retained for re-use on areas to be re-vegetated following the construction phase.

Mitigation of Landscape Character and Visual Effects

5.6.3. The site selection rationale and design process for the Proposed Development is described in Chapter 3: Description of the Proposed Development. The BESS and Substation have been located and designed to minimise the effect on the surrounding landscape and visual resource, by locating the BESS and Substation Extension within existing areas of coniferous plantation, on brownfield sites, situating these developments at relatively low elevations and integrating them into the local landscape setting by respecting existing ground levels, and in the case of the Substation Extension, by positioning it immediately adjacent to the operational substation.

5.7. Detailed Appraisal of Residual Effects

Scoped-in Receptors

5.7.1. The baseline review of the Site and its surrounding landscape character, landscape designations and visual receptors concludes that the following receptors should be appraised in respect of likely effects from the Proposed Development. All other landscape and visual receptors are not considered likely to experience material effects as a consequence of the Proposed Development:

- Sweeping Moorlands and Flows LCT (LCT 134)
- Viewpoint 1: CA11.03 Limekiln Forest (Substation Extension)
- Viewpoint 2: CA11.03 Limekiln Forest (BESS compound)
- Viewpoint 3: Beinn Ratha
- Viewpoint 4: Borlum Hill
- Viewpoint 5: Reay Footpath
- Viewpoint 6: Shebster

Sweeping Moorlands and Flows (LCT 134)

Baseline Characteristics

5.7.2. The Sweeping Moorland and Flows LCT occurs extensively across much of Caithness and Sutherland and is characterised by broad expanses of relatively low-lying and gently undulating open moorland. The landform is typically below 150 m with the high points formed by occasional, small, isolated hills, such as Beinn Ratha (242 m AOD). The water-logged peaty soils give rise to landcover comprising mosses and wetland grasses, although some extensive areas of coniferous woodland and improved grazing occurs around the more settled margins. There is very little settlement in this LCT and at the core there is a sense of remoteness, albeit often with some influence from wind farm development, electricity transmission lines and/or coniferous woodland.

5.7.3. The Proposed Development is located in the Limekiln Forest coniferous plantation on the northern fringe of the LCT. This area is characterised by the enclosure of forestry in contrast to the openness of the core flows and moorland to the south. Furthermore, the rotational felling and restocking presents a heavily managed and modified landscape in contrast to the natural landscape of the flows. The recently constructed Limekiln Wind Farm is also located in this LCT making large-scale energy development an established feature of the baseline character. This northern part of the LCT lacks the sense of remoteness and naturalness, experienced in those undeveloped and unmodified parts of the LCT to the south.

5.7.4. Development in the Farmed Lowland Plains LCT to the north of the Sweeping Moorland and Flows LCT has an influence on landscape character. This includes the Dounreay Nuclear Power Facility, Vulcan NRTE, SSE Substation and Forss Business and Technology Park, along with rural settlement and roads, and the wider modification of the landscape for agricultural practices. Baillie Hill and Forss Wind Farms occur in this Farmed Lowland Plain LCT, to the north-east of the operational Limekiln Wind Farm.

Sensitivity

5.7.5. The value of this LCT is medium to medium-high. There are no national or regional landscape designations covering this LCT which would otherwise denote a particular recognised landscape value. The south-eastern part of the LCT is covered by the East Halladale Flows Wild Land Area (WLA), as shown on Figure 5.5. This is a Mapped Interest relating to wildness qualities and this raises the value of this part of the LCT to medium-high. The remaining parts of the LCT are considered to have a medium value, including the northern part where the Site is located.

5.7.6. The susceptibility of this LCT to the effects of BESS and Substation Extension development is medium.

5.7.7. The combination of the value of the Site and its susceptibility to the Proposed Development results in an overall sensitivity rating of **Medium**.

Magnitude of Change and Level of Effect

5.7.8. **Magnitude of Change:** The ZTV pattern in Figure 5.4 shows that visibility of the Proposed Development would be limited within a 2 km radius from the Proposed Development, due largely to containment by the retained areas of forestry. Pockets of high to medium visibility would arise in the immediate surroundings of the BESS compound and Substation Extension where these elements would be experienced at close range during construction and operation, in the context of the operational Limekiln Wind Farm and ongoing forestry management.

5.7.9. Beyond the 2 km range the ZTV indicates swathes of low visibility across higher ground to the south west; west and north west of the Site, affecting sweeping open moorland parts of the LCT as well as higher levels of visibility arising across a small area on the western side of Hill of Shebster. This visibility will be experienced in the context of the operational wind farm, as well as other human influences in the adjoining LCT 143. The small scall and limited extent of the Proposed Development will limit the magnitude of effect in this context.

5.7.10. Taking these factors into account the magnitude of change on the defining characteristics of the LCT is considered to be **medium to low** during construction (and decommissioning) and **low** during operation of the Proposed Development.

5.7.11. **Level and nature of effect:** The level of effect on character of LCT 134, Sweeping Moorland and Flows as related to the Site would be **Moderate/Minor** during construction reducing to **Minor** during operation of the Proposed Development. These effects would occur where visibility arises within approximately 2 km of the Site.

Definitions of these effects are provided in Appendix 5.1: Table TA4.

5.7.12. Across other parts of the LCT within the Study Area the appraised effect would be lower, or non-existent, where ZTV coverage indicates no visibility would arise. This is generally because of increased separation distance from the Proposed Development and/ or an absence of visibility.

Cumulative Effects on LCT 134

5.7.13. Where visibility of the Proposed Development arises, it will be most likely be experienced in the context of the Limekiln Wind Farm and its infrastructure. The Substation Extension will almost always be experienced in the context of the operational wind farm substation, due to immediate proximity. The operational wind farm already has a defining influence on the character of the north eastern extremity of LCT 134 and the addition of the Proposed Development will marginally increase the perceived influence of energy related development within localised parts of the LCT, specifically where experienced at close range (c500 m). The cumulative effect is considered to be of a low order of magnitude and the overall cumulative effect is likely to be **Minor**.

Viewpoint 1: CA11.03 Limekiln Forest (Substation Extension)

Baseline Visual Amenity

5.7.14. The viewpoint is located on the Core Path (Ref CA11.03) which is a circular walk through the Limekiln Forest, as shown in Figure 5.1. The path links to other Core Paths which connect to the village of Reay, to the north of the Application Site. It is not known how popular the walk around Limekiln Forest is, but the relatively close proximity to the village suggest it has the potential to appeal to locals as a convenient and accessible route for walking and recreation.

5.7.15. While heavily influenced by the sense of enclosure provided by the expansive areas of forestry, the recent construction of the Limekiln Wind Farm has had a material effect on the character and visual amenity of the circular route, through the introduction of 19 wind turbines and associated infrastructure in the Forest. The viewpoint is located at a point on the circuit where the Core Path passes the recently constructed substation serving the wind farm and this has fundamentally changed the perception along a short section of the route, extending to approximately 200 m in length.

5.7.16. The existing substation introduces energy infrastructure at close range in a part of the forest which has been cleared, along with a large number of other coupes which have been taken out to facilitate turbine bases. This have resulted in parts of the Forest having a more open character, while replanting takes time to establish, and this is beneficial to the amenity of the route in some places where longer range views to Beinn Ratha have been opened up, for example.

Sensitivity

5.7.17. The value of this Core Path is medium-high. While there are no national or regional landscape designations covering the Limekiln Forest, which would otherwise denote a particular recognised landscape value, it is considered likely to have local value as an amenity for residents of Reay to use for recreational purposes.

5.7.18. The susceptibility of people using the Core Path is generally medium-high, but given the proximity to and visual impact from the operational substation as a baseline feature, susceptibility to the Proposed Development is moderated along this stretch of path. Susceptibility is considered to be medium.

5.7.19. The combination of the medium-high value of the Site and its medium susceptibility to the Proposed Development results in an overall sensitivity rating of **Medium-High**.

Magnitude of Change and Level of Effect

5.7.20. **Magnitude of Change**: The photowire for Viewpoint 1 in Appendix 5.3 indicates the location of the extent of the BESS compound (blue parameters) and Substation Extension (pink parameters) modelled at the respective heights of 4 m and 7.5 m. The Proposed Development

would be seen in the same field of view as the operational substation, but would extend its footprint to the north. Due to the closer proximity of the Substation Extension to the viewpoint, it would appear appreciably larger than the operational substation as a result. The BESS compound would not be seen in this view from the Core Path (and consequently is illustrated by Viewpoint 2).

5.7.21. The Proposed Development would be set back into and surrounded by retained forestry plantation, which would provide a degree of containment and integration, reflecting the siting of the existing substation. It would nonetheless be a prominent new element in views from the Core Path, affecting a stretch of some 200 m in length. The magnitude of change is considered to be **high** during construction (and decommissioning) and **medium-high** during operation of the Proposed Development.

5.7.22. **Level of Effect**: The level of effect on the visual amenity and view at Viewpoint 1, Core Path would be **Major** during Construction and **Major/ Moderate** during operation of the Proposed Development.

Cumulative Visual Effects

5.7.23. The close integration of the Proposed Development (Substation Extension) with the operational substation would serve to minimise cumulative effects, albeit there would be an incremental increase in the scale and extent of the energy infrastructure in this location. The degree of containment afforded by the surrounding forestry would largely contain the cumulative effects to the immediate locality of the Substation Extension. The operational substation already has a defining influence on the view and the addition of the Proposed Development will marginally increase the perceived influence of energy related development. The cumulative effect is considered to be of a medium to low order of magnitude and the overall cumulative effect is likely to be **Moderate.**

Viewpoint 2: CA11.03 Limekiln Forest (BESS compound)

Baseline Visual Amenity

5.7.24. The viewpoint is located on the Core Path (Ref CA11.03) which is a circular walk through the Limekiln Forest, as shown in Figure 5.1. The path links to other Core Paths which connect to the village of Reay, to the north of the Application Site. It is not known how popular the walk around Limekiln Forest is, but the relatively close proximity to the village suggest it has the potential to appeal to locals as a convenient and accessible route for walking and recreation.

5.7.25. While heavily influenced by the sense of enclosure provided by the expansive areas of forestry, the recent construction of the Limekiln Wind Farm has had a material effect on the character and visual amenity of the circular route, through the introduction of 19 wind turbines and associated infrastructure in the Forest. The viewpoint is located to the south of the BESS compound, at a point on the circuit where the Core Path enters a newly cleared area of forest, overlooking the restored former construction compound for the Limekiln Wind Farm. The process of forest management and wind farm construction has fundamentally changed the perception along a short section of the route, extending to approximately 400 m in length.

5.7.26. The cleared area of the Site has resulted in parts of the Forest having a more open character, while replanting takes time to establish, and this is beneficial to the amenity of the route in some places where longer range views out have been opened up, for example, and as can be seen in the baseline photograph.

Sensitivity

5.7.27. The value of this Core Path is medium-high. While there are no national or regional landscape designations covering the Limekiln Forest, which would otherwise denote a particular recognised landscape value, it is considered likely to have local value as an amenity for residents of Reay to use for recreational purposes.

5.7.28. The susceptibility of people using the Core Path is generally medium-high, but given the proximity to and visual impact from the operational Wind Farm as a baseline feature, susceptibility to the Proposed Development is moderated along this stretch of path. Susceptibility is considered to be medium.

5.7.29. The combination of the medium-high value of the Site and its medium susceptibility to the Proposed Development results in an overall sensitivity rating of **Medium-High**.

Magnitude of Change and Level of Effect

5.7.30. **Magnitude of Change:** The baseline photography and photowire for Viewpoint 2 in Appendix 5.3 indicates the location of the extent of the BESS compound (blue parameters) and Substation Extension (pink parameters) modelled at the respective heights of 4 m and 7.5 m. The proposed BESS compound would be seen in views heading north along the path at this location. The Substation Extension would be concealed by forestry. The viewpoint is elevated above the Proposed Development and overlooks the now restored construction compound for the Limekiln Wind Farm, set against a backdrop of retained forestry. The operational wind turbines have a discernible presence in views south and east from the viewpoint.

5.7.31. The Proposed Development would be set back into and surrounded by retained forestry plantation, which would provide a strong degree of containment and integration. It would nonetheless be a prominent new element in views from the Core Path, affecting a stretch of some 400 m in length. The magnitude of change is considered to be **high** during construction (and decommissioning) and **medium-high** during operation of the Proposed Development.

5.7.32. **Level of Effect:** The level of effect on the visual amenity and view at Viewpoint 2, Core Path would be **Major** during Construction and **Major/ Moderate** during operation of the Proposed Development.

Cumulative Visual Effects

5.7.33. The close integration of the Proposed Development (BESS compound) within Limekiln Forest would serve to minimise cumulative effects, albeit there would be an incremental increase in the scale and extent of the energy infrastructure in this location where the BESS is seen alongside the operational Limekiln Wind Farm. The degree of containment afforded by the surrounding forestry would largely contain the cumulative effects to the immediate locality of

the forest clearing and BESS compound. The Proposed Development will marginally increase the perceived influence of energy related development. The cumulative effect is considered to be of a medium to low order of magnitude and the overall cumulative effect is likely to be **Moderate**.

Viewpoint 3: Beinn Ratha

Baseline Visual Amenity

5.7.34. This viewpoint is located at the summit of Beinn Ratha and was selected to represent the view experienced by hill walkers. There is no formal parking or defined route to guide walkers. The hill is not difficult to climb although the boggy ground conditions may discourage some walkers, especially as there is no path. Although there is little evidence to suggest this is a frequently climbed hill, it does provide one of the few clear vantage points readily accessible from this section of the northern and settled coastline.

5.7.35. The summit of Beinn Ratha is at an elevation of 242 m AOD and although not a high hill, within the context of the surrounding Sweeping Moorland, high enough to afford a 360-degree panoramic view of the surrounding landscape and seascape. The character of the view varies with the greatest visual interest occurring to the west and south where the large expanse of the Sweeping Moorland and Flows LCT appears wild and remote. The attention of the viewer tends to be drawn in these directions.

5.7.36. The view towards the Proposed Development is characterised by the Limekiln Wind Farm and Limekiln Forest coniferous plantation which forms an almost continuous blanket covering across the low hills of the moorland, albeit with large patches of recent felling and replanting. The cultivated origins of the plantations are evident through the use of a single species, the predominance of a single age crop, the often straight geometric edges and the pattern of subdivisions created by forest tracks and fire breaks. The forestry presents a contrasting darkness to the lightness of the open moorland and detracts from the overall character and continuity of the wider landscape.

5.7.37. The coastal edge presents an aspect of contrasting character to this view. Its character appears flatter and more settled with the green of improved pasture and faint outline of field patterns denoting the agricultural land use. Small scale development can be seen concentrated in the settlement of Reay and scattered across the rural landscape. The larger scale developments of Baillie Hill and Forss wind farms are evident; Baillie Hill set in the Mixed Agriculture and Settlement LCT at a range of 7.49 km such that the turbines appear as medium scale structures; and Forss set in the Open Intensive Farmland on the coast at a range of 10.53km such that the turbines appear as small scale structures. Dounreay Nuclear Power Plant is also visible and marks this coastal edge as an area occupied by industrial development.

Sensitivity

The value of the view is medium-high. Although there are no scenic designations covering this view, either at the national or regional level, the view is covered by the East Halladale WLA. It is also of importance at the local level as it provides one of the few relatively easily

accessible vantage points from which to view this local landscape. It should be noted that there is little evidence to suggest that the hill is frequently used by hill walkers.

The susceptibility of the view is medium, with the view to the east and north-east being tempered by the presence of the commercial forestry which denotes the extent to which this landscape has been modified, as well as the presence of large scale developments including Limekiln Wind Farm, operational Baillie Hill and Forss wind farms and Dounreay Nuclear Power Plant.

The combination of the value of the view and susceptibility to the Proposed Development results in an overall sensitivity rating of **Medium-High**.

Magnitude of Change and Level of Effect

5.7.38. **Magnitude of Change:** The photowire for Viewpoint 3 in Appendix 5.3 indicates the location of the extent of the BESS compound (blue parameters) and Substation Extension (pink parameters) modelled at the respective heights of 4 m and 7.5 m. The Proposed Development would be seen in the same field of view as the northern part of the operational Limekiln Wind Farm and positioned within the northern extent of the Limekiln Forest. Baillie Wind Farm provides a more distant background to the view, with Dounreay and Forss Wind farm seen further north associated with the coastline.

5.7.39. The Proposed Development would be set back against areas of retained forestry and would be a small element in the panoramic views available from the summit of Beinn Ratha. The magnitude of change is considered to be **low** during both construction (and decommissioning) and during operation of the Proposed Development.

5.7.40. **Level of Effect:** The level of effect on the visual amenity and view at Viewpoint 3, Beinn Ratha would be **Moderate/Minor** during construction and operation of the Proposed Development.

Cumulative Visual Effects

5.7.41. The Proposed Development will be experienced in the context of the Limekiln Wind Farm and its infrastructure, which is a defining element in the view east from Beinn Ratha. The Substation Extension will be experienced in the context of the operational wind farm substation, due to immediate proximity. The operational wind farm already has a defining influence on the view and the addition of the Proposed Development will marginally increase the perceived influence of energy related development. The cumulative effect is considered to be of a low order of magnitude and the overall cumulative effect is likely to be **Moderate/ Minor**.

Viewpoint 4: Borlum Hill

Baseline Visual Amenity

5.7.42. Borlum Hill is a small hill located on the northern edge of the Limekiln coniferous plantation. The viewpoint has been selected to represent the close range views of locals who may use the area to the north of the Proposed Development for walking. Although it does not appear to be frequently used, there are enough tracks across the hill slopes to suggest some people

do visit this low hill top. Walking does not appear to be encouraged as there is no provision for parking, no sign-posting or formal path and access from the track to the east needs to be made by crossing a burn and a fence.

5.7.43. At a height of approximately 80 m AOD, the hill presents an easy, but steep climb and affords a short-range panorama over the local area. The view south is characterised by the expansive coniferous plantation which covers much of the immediate landscape, together with the operational Limekiln Wind Farm, as shown in the baseline view. The underlying landform is low and gently undulating with a series of small open knolls rising up from the forest cover along this northern edge. The visual interest in this view is limited, with Beinn Ratha to the right presenting one of the few distinctive landform features.

5.7.44. To the north, the view extends out across the coastal edge to the North Atlantic, with Orkney visible in clear weather, to the north-east. The coastal edge is typified by its settled nature, with the land improved for pasture and a concentration of properties in the settlement of Reay and dispersed throughout the wider rural landscape. Large scale development is visible in the form of Dounreay Nuclear Power Plant, visible next to the coast, and Baillie Hill wind farm, partially concealed by Shebster Hill to the east. Baillie Hill Wind Farm is seen as 21 turbines set at a range of 4.79 km such that it forms a contained group of medium scale structures, which act as the focus of the view.

Sensitivity

5.7.45. The view and the viewpoint are not covered by any national or regional designations which would otherwise denote a special value. While there is little evidence to suggest this is a frequently visited viewpoint, the hilltop is, nonetheless, in easy reach of the village of Reay and does present a view of local value.

5.7.46. Limekiln Wind Farm presents the defining feature of the view, with coniferous plantation also visible to the south and the settlement of Reay visible to the north. The susceptibility of viewers to the effects of the Proposed Development is moderated by the extent to which this settled landscape has been modified by developments including Limekiln Wind Farm to the south, Dounreay Nuclear Power Plant to the north-east and Baillie Hill Wind Farm to the east. Susceptibility is considered to be medium.

5.7.47. The combination of the medium value of the view and susceptibility to the Proposed Development results in an overall sensitivity rating of **Medium**.

Magnitude of Change and Level of Effect

5.7.48. **Magnitude of Change**: The photowire for Viewpoint 4 in Appendix 5.3 indicates the location of the extent of the BESS compound (blue parameters) and Substation Extension (pink parameters) modelled at the respective heights of 4 m and 7.5 m. The Proposed Development would be seen in the same field of view as the operational Limekiln Wind Farm and positioned within the core of the northern extent of the Limekiln Forest, substantially concealed by the plantation. Only the uppermost parts of the Proposed Development would be seen located within the Forest.

5.7.49. The Proposed Development would be a small element in the panoramic view available from the summit of Borlum Hill. The magnitude of change is considered to be **low** during both construction (and decommissioning) and during operation of the Proposed Development.

5.7.50. **Level of Effect**: The level of effect on the visual amenity and view at Viewpoint 4, Borlum Hill would be **Minor** during Construction and operation of the Proposed Development.

Cumulative Visual Effects

5.7.51. The Proposed Development will be experienced in the immediate context of the Limekiln Wind Farm, which is a defining element in the view south from Borlum Hill. The operational wind farm already has a defining influence on the view and the addition of the Proposed Development will marginally increase the perceived influence of energy related development. The cumulative effect is considered to be of a low order of magnitude and the overall cumulative effect is likely to be **Minor**.

Viewpoint 5: Reay Footpath

Baseline Visual Amenity

5.7.52. Reay Footpath forms part of the Core Path circuit known as Achins and Borlum Circuit (CA11.09) and has been selected to represent the view which could potentially be experienced by residents of Reay from properties along the southern boundary of the settlement or from streets which afford open views towards the south. Views from the southern edge of Reay will be partially obscured by close range landform and forestry. To enable a more open view, the viewpoint is located approximately south of Reay, on the track that extends in this direction. Two properties sit at the start of the track, although neither face towards the development.

5.7.53. The focus of the view is the northern edge of Limekiln Forest which contains Limekiln Wind Farm, seen beyond the band of coniferous woodland to the south of the viewpoint. Beinn Ratha, forms a feature to the right of the view on account of its distinctive form and higher elevation in comparison to the low sweep of the surrounding landscape. With the exception of the forestry on the lower slopes, Beinn Ratha is one feature in this landscape which appears relatively un-modified by human intervention. The track, the wall and fencing, the electricity transmission line, the forestry and the improved pasture are all evidence of human influences in this landscape. In particular, the electricity transmission line introduces a feature which contrasts with the otherwise rural character of the landscape, appearing man-made, large in scale, and with their vertical stature contrasting with the largely horizontal emphasis of the landscape.

5.7.54. The view is typical of the Farmed Lowland Plain LCT 143 with small fields of rough grazing for sheep bounded by fences or stone walls. The coniferous plantation at Limekiln has encroached into this agricultural area and is visible as a broad band stretching across the middle ground of the view. Apart from Limekiln Wind Farm; Beinn Ratha and Borlum Hill, there are few distinctive features. The view does, however, have a local value in terms of the visual amenity of residents and the open outlook this view offers from their properties and gardens.

Sensitivity

5.7.55. The value of this view is medium. The view itself is unexceptional, comprising predominantly low-lying farmland and woodland plantations, typical of this area. The view is not extensive and in its contained extent, Beinn Ratha forms the most notable feature. This landscape is not designated at either the national or regional level. This denotes a lack of scenic value which moderates the overall value of the viewpoint.

5.7.56. There are no other wind farms visible from this viewpoint. Electricity transmission towers are visible in this view and these detract from what would otherwise be a rural landscape with only small-scale human artefacts, such as walls and fencing, evident. The absence of wind turbines in the baseline view increases the susceptibility of residents to the proposed introduction of these structures as they will appear as new elements at contrast with the existing character. Susceptibility is considered to be medium-high.

5.7.57. The sensitivity of this view is medium-high on account of the importance of the visual amenity of residents in Reay. Their views have the potential to be longer in duration especially in instances where the Proposed Development aligns with views from the internal living spaces of residents. These views are not of an undeveloped landscape; Limekiln Wind Farm and electricity transmission towers and lines are already visible in views from the southern boundary edge. These tall vertical structures establish energy infrastructure as a feature of the baseline, and this moderates the sensitivity of the view.

5.7.58. The combination of the medium value of the view and medium-high susceptibility to the Proposed Development results in an overall sensitivity rating of **Medium-High**.

Magnitude of Change and Level of Effect

5.7.59. **Magnitude of Change**: The photowire for Viewpoint 5 in Appendix 5.3 indicates the location of the extent of the BESS compound (blue parameters) and Substation Extension (pink parameters) modelled at the respective heights of 4 m and 7.5 m. The Proposed Development would be concealed behind the northern edge of Limekiln Forest plantation and there would currently be no visibility of it. Should the forestry be removed then visibility would increase, albeit the BESS compound is likely to shielded by the layering of forestry between the proposed Substation Extension and BESS site. No part of the operational substation is currently seen in this view. The Limekiln Forest Management Plan indicates the Long Term retention of the forestry edge along the northern edge of the plantation and the current level of screening is likely to be retained.

5.7.60. The Proposed Development would not be seen from this location, although some visibility may be open up further west along the path, according to the ZTV. It is also possible that some construction equipment may be seen during the construction phase. Taking a precautionary approach, the magnitude of change is considered to be **low** during construction (and decommissioning) and **negligible** during operation of the Proposed Development.

5.7.61. **Level of Effect**: The level of effect on the visual amenity and view at Viewpoint 5, Reay Footpath would be **Moderate/Minor** during Construction and **Minor** during operation of the Proposed Development.

Cumulative Visual Effects

5.7.62. The Proposed Development will not be experienced in the context of the Limekiln Wind Farm, or other energy infrastructure in the foreground of the view, and the level of cumulative effect will be **Negligible** at this viewpoint.

Viewpoint 6: Shebster

Baseline Visual Amenity

5.7.63. This viewpoint at Shebster has been selected to represent the visual amenity of residents occupying properties in this small community, as well as the visual amenity of road users travelling along the minor road between the B874 at Glengolly and the A836 at Isauld. The viewpoint is taken close to the bus shelter on the northern side of the road. This minor road also forms part of the National Cycle Route.

5.7.64. Shebster is a small cluster of properties situated principally along the northern edge of the minor road. The majority of the properties face south with views over the immediate fields towards the forestry at East Shebster. Views towards Limekiln Wind Farm and Limekiln Forest coniferous plantation occur at an oblique angle such that they are unlikely to be apparent from within the properties but will be apparent from gardens and from the minor road to west-bound road-users. The coniferous plantation marks a dark green and bold edge along the skyline ridge, its man-made origins evident in the straight boundary edges and single species crop.

5.7.65. The existing development, visible in the view and around the viewpoint, is relatively small in scale and typical of a rural location such as this, although the recent completion of the Limekiln Wind Farm provides a readily discernible human influence on the skyline to the south west. In the opposite direction to the view, large scale development is visible in the form of Baillie Hill wind farm. It is set behind the hill ridge to the north-east of the community and although the properties do not face out onto it, it will be readily visible from the road and potentially visible from gardens and rear views from properties.

Sensitivity

5.7.66. The value of this view is medium. The surrounding landscape is not covered by any regional or national scenic designations which would otherwise denote a special value. The view presents a typical mix of farmland and forestry and lacks any special landscape features which would otherwise give it more distinction. It is, nonetheless, a landscape of local value and the view out towards the Sweeping Moorland, albeit diminished in character by the farmland and forestry, contributes to the setting of the settlement of Shebster. The view in the opposite direction is defined by the presence of Baillie Hill wind farm which establishes

wind farm development as a feature of the wider view and this reduces the susceptibility of residents to the Proposed Development.

5.7.67. The susceptibility of the resident's is high because of the importance of their visual amenity, whereby views have the potential to be experienced over longer durations. The susceptibility of the road-users is medium (car drivers) and medium-high (cyclists) because of the relative speed at which they will be travelling and, therefore, the transitory nature of the views and the inability to focus on the surrounding landscape with the same degree of attention as static viewers.

5.7.68. The combination of the medium value of the view and medium to high susceptibility to the Proposed Development results in an overall sensitivity rating of **Medium-High**.

Magnitude of Change and Level of Effect

5.7.69. **Magnitude of Change**: The photowire for Viewpoint 6 in Appendix 5.3 indicates the location of the extent of the BESS compound (blue parameters) and Substation Extension (pink parameters) modelled at the respective heights of 4 m and 7.5 m. The Proposed Development would be concealed within the Limekiln Forest plantation and there would currently be no visibility of it. Should the forestry on Site be removed then visibility could increase, albeit the BESS compound and Substation Extension are likely to shielded by the depth and layering of forestry between the Proposed Development and Shebster, which includes forestry outside the Limekiln Forest. No part of the operational substation is currently seen in this view. It is reasonable to assume that some level of forestry will remain on the intervening ground during rotational felling and replanting. The magnitude of change during both construction and operation is **negligible**.

5.7.70. **Level of Effect**: Taking account of the separation distance and absence of visibility, the level of effect is considered to be **Minor** during construction (and decommissioning) and during operation of the Proposed Development.

Cumulative Visual Effects

5.7.71. The Proposed Development will not be experienced in the context of the Limekiln Wind Farm, or other energy infrastructure in the view, and the level of cumulative effect will be **Negligible** at this viewpoint.

5.8. Conclusions

5.8.1. Chartered Landscape Architects at SLR Consulting Ltd. have conducted a Landscape and Visual Appraisal (LVA). The methodology follows that set out in GLVIA, 3rd edition and photomontage visualisations accord with the Landscape Institute guidance note - Visual Representation of Development Proposals, Technical Guidance Note 06/19.

5.8.2. No part of the Proposed Development is located within a landscape designated for its scenic value and quality. The Site has been carefully identified in order to minimise potential adverse landscape and visual (and other environmental) effects by positioning it within the operational Limekiln Wind Farm site and, in the case of the Substation Extension, immediately adjacent to the operational substation for the wind farm. This has had the beneficial effect of choosing a site which benefits from a high level of screening when viewed from outside the confines of the Limekiln Forest and in providing a logical rationale for the siting and design of the Proposed Development.

5.8.3. The appraisal has found that the only locations where high levels of landscape and visual effect may arise is within the Application Site itself, where the BESS compound and Substation Extension can be experienced at close range from the Core Path. Beyond the boundaries of the Site the Proposed Development is neither prominent or intrusive and the screened ZTV demonstrates how beneficial the choice of site is.

5.8.4. On the basis of this appraisal, it can be concluded that the Proposed Development will have highly localised landscape and visual effects on the Site and surrounding area and will be well related to the established wind farm energy infrastructure operating in the Limekiln Forest plantation.

Appendix 5.1: Appraisal Criteria

Table TA1: Landscape Elements - (Criteria for Sensitivity and Magnitude of Change)	
Sensitivity Criteria	**Magnitude of Change Criteria**
The **sensitivity of a landscape element** is determined by a combination of the value of the landscape element and its susceptibility to accommodate the proposed development. **Value** of the landscape element: • Its importance in the pattern of elements that constitutes the landscape character of the area and whether or not landscape elements are part of a designated landscape. • The quality of the landscape element, that reflects its condition and state of repair. **Susceptibility** to change: • The ability of the individual element or feature to accommodate the proposed development without undue consequences for maintenance of the baseline. Professional judgement is used based on: • The degree to which the element can be restored, replaced or substituted.	The **magnitude of change on landscape elements** is an expression of the scale of the change that will result from the proposed development and is dependent on a number of variables regarding the size or scale of the change and its geographical extents, based on the following criteria: • The extent of the existing landscape elements that will be lost, the proportion of the total extent that this represents as a contribution of that element to the character of the landscape. • The degree to which the aesthetic or perceptual aspects of the landscape are altered either by the removal or existing components of the landscape or by addition of new ones. • Whether the effects change the key characteristics of the landscape which are critical to its distinctive character.

Table TA.2: Landscape Character - (Criteria for Sensitivity and Magnitude of Change)	
Sensitivity Criteria	**Magnitude of Change Criteria**
The **sensitivity of a landscape character receptor** is determined by a combination of the value of the landscape character receptor and its susceptibility to accommodate the proposed development. **Value of the landscape character receptor**: • Its importance in terms of any designations that may apply. • Its quality in terms of scenic quality, sense of place, rarity and representativeness. • The experience of the landscape in relation to perceptual responses, cultural associations, its iconic status, its recreational value, and the contribution of other values such as nature conservation or archaeology. **Susceptibility to change**: • The specific nature of the proposed development, its size, scale, location, context and characteristics. • The degree to which the receptor may accommodate the influence of the proposed development. • The extent to which the proposed development will influence the character of the landscape receptors across the study area.	The **magnitude of change on landscape character receptors** is dependent on a number of variables regarding the size or scale of the change and its geographical extents, based on the following criteria: • The extent of existing landscape elements that will be lost, the proportion of the total this represents and the contribution of that element to the character of the landscape; • The degree to which the pattern of elements that makes up the landscape character will be altered by the proposed development, by removal or addition of elements in the landscape; • The extent to which the effects change the key characteristics of the landscape, identified in the baseline study, which may be critical to the distinctive character of the landscape; • The distance between the landscape character receptor and the proposed development. Generally, the greater the distance, the lower the scale of change; and • The proportion of the proposed development that will be seen. The geographic area over which the landscape effects will be experienced (within the study area) is also considered, which is distinct from the size or scale of effect.

Table TA 3: Visual Receptors and Views - (Criteria for Sensitivity and Magnitude of Change)	
Sensitivity Criteria	**Magnitude of Change Criteria**
The **sensitivity** of a view is determined by a combination of the value of the view and the susceptibility of the visual receptors to the change that the proposed development will have on the view: **Value of the view**: a reflection of the recognition and importance attached either formally through identification on mapping or being subject to planning designations, or informally through the value which society attaches to the view(s). The value of a view is classified as high, medium-high, medium, medium-low or low and the basis for the appraised level is made clear using evidence and professional judgement. **Susceptibility to change**: the nature of the viewer experiencing the view and how susceptible they are to the potential effects of the proposed development. Professional judgement is used based on: • Nature of the viewer: the occupation or activity which they are engaged in at the viewpoint or series of viewpoints. • The principal visual characteristics: those features which define the view. • Experience of the viewer: The experience of the visual receptor relates to the extent to which their focus is directed on the view, the duration and clarity of the view and whether it is a static or transitory view.	The **magnitude of change** on views is dependent on a number of variables: • The distance between the visual receptor and the development; generally, the greater the distance, the lower the magnitude of change; • The scale and character of the context within which the development will be seen, as this will determine the degree to which the development can be accommodated in the existing outlook. The scale of the landform and the patterns of the landscape, the existing land use and vegetation cover, and the type of development and settlement seen in the baseline view will all be relevant; • The extent of the development that will be seen; • The position of the development in relation to the principal orientation of the receptor. If the development is seen in a specific, directional vista from a receptor the magnitude of change will generally be greater; and • The width of the view available and the proportion of the view that is affected by the development. Generally, the more of a view that is affected, the higher the magnitude of change will be.

Table TA.4: Level of Effect		
Level of Effect	**Definition of Landscape Effect**	**Definition of Visual Effect**
Major	Where the proposed changes are sufficiently large to substantially alter the character, scale or pattern of the landscape. Substantial alteration to landscape features or valued aspects of a landscape.	Where the proposed changes are sufficient to substantially alter a nationally important view, or view of high scenic quality.
Major - Moderate	Where the proposed changes noticeably contrast with the underlying character of an area or substantially alter a locally important landscape feature / valued aspect of the landscape.	Where the proposed changes to views contrast with the existing view and/ or substantially alter a locally important view, or view of scenic quality.
Moderate	Where the proposed changes contrast with the underlying character of an area or noticeably alter a landscape feature or aspect of landscape.	Where the proposed changes to views contrast with the existing view or noticeably alter a view.
Moderate - Minor	Where proposed changes are readily apparent and at slight variance with the underlying character of an area and/ or landscape features.	Where proposed changes to views are noticeable and at slight variance with the existing view.
Minor	Where proposed changes are intermittent and at slight variance with the underlying character of an area or landscape features.	Where proposed changes to views are intermittent and at slight variance with the existing view.
Negligible	Where proposed changes have an indiscernible effect on the character of an area or landscape features.	Where proposed changes have an indiscernible effect on views/ visual amenity.