

Technical Appendix 7.2: Landscape Character Assessment

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1.0 Landscape Effects on the Site

1.1 Introduction

The site is located on an upland ridge between the Tweed Valley and the Kingledoors Burn Valley to its north, on Glenmuck height (472 m above ordnance datum, AOD) and Weird Law (447 m AOD), with one turbine on the slope running up to Upper Oliver Dod (490 m AOD). The site includes the ridge top (to a boundary wall), and the southern slopes down to the A701, crossing the River Tweed upstream of Newbigging. The highest point on the site is Upper Oliver Dod, the lowest part of the site is at 260 m AOD on the River Tweed.

The ridge and slopes to approximately halfway down the slopes are within the Southern Uplands – Borders Landscape Character Type (LCT, LCT 95), with the lower slopes within Upland Valley with Pastoral Floor (LCT 113). The boundary between these LCTs is transitional. NatureScot GIS data provides a line across the slopes which does not correspond to contours or a boundary on the land (see Figure 7.4). The slopes are forested and detailed review of the character of the slopes would suggest that the boundary should be along the lower edges of the forest plantation where forested slopes change to more open valley sides.

The turbines would all be located within the Southern Uplands - Borders LCT. The substation, battery energy storage system (BESS) and construction compound, and the junction with the A701 would be within Upland Valley with Pastoral Floor (LCT 113), although within forest plantations, so within the transitional area into Southern Uplands.

The Proposed Development would relate to the upland landscape of the host Southern Uplands - Borders LCT. The proposed turbines would be visible from the surrounding hills and from within adjacent valleys (as shown on the ZTVs). They would form large-scale elements in the context of a large-scale upland landscape. Effects on the valley floor would be indirect and are considered separately below.

The large-scale landform and characteristic land cover of the host LCT gives the site a lower susceptibility to wind energy development. Glenkerie Wind Farm is located to the north-east of the site, on the next ridge to the north but within the same LCT. Whitelaw Brae (under construction) will be located within the LCT to the south of the Tweed Valley. The Clyde group (made up of Clyde Wind Farm and Clyde Extension) are also on ridges to the west, within the LCT and into the adjacent Southern Uplands - Glasgow & Clyde Valley LCT (LCT 217).

The site is within the Tweedsmuir Uplands Special Landscape Area (SLA¹), and there are other designated landscapes in the wider area (see Figure 7.5). This indicates a higher landscape value relative to other undesignated parts of the study area, although with existing wind farms present, there is a degree of landscape susceptibility. The sensitivity of the site landscape is judged to be medium.

1.2 Construction Stage

Effects during the construction stage would result from vehicle/crane movements and other activities associated with the felling of small areas of forest, construction of access tracks, compounds and substations, BESS and turbine installation.

The construction phase would have direct effects on the landscape fabric (landform and landcover). Three of the proposed turbines would be located on the moorland above the forest plantations, with the others within the existing forest, although some areas would be felled. Borrow pits would be located in forested areas. The substation, BESS facilities and construction compound would be located on lower ground, with a track running up to the proposed turbine areas from the junction with the A701 to the south of Tweedsmuir. The track would follow existing tracks for most of its length (requiring upgrades only), with short sections of new track to access the turbine locations off this route. The extent of physical effects within the site would cover the footprint of the tracks, hardstandings, turbines, substation compounds and other elements, but would constitute a small proportion of the site as a whole. The construction activity would be concentrated at turbine locations, with materials being brought to the site compound and construction and installation taking place within the footprint of the Proposed Development. There would be lights on the site during construction and on moving vehicles.

The Proposed Development would introduce large-scale man-made structures (turbines) to the site. Turbines are present in the nearby landscape – with Clyde group and Glenkerie Wind Farm within approximately 5 km, and Whitelaw Brae under construction also. The character of the landscape of the

¹ NatureScot advises that all local level landscape designations can be referred to as Local Landscape Areas. The term Special Landscape Areas is retained here for consistency with SBC terminology

site is large, and the existing turbines are within the same LCT as the site, Southern Uplands – Borders (Clyde group extends into Southern Uplands – Glasgow & Clyde Valley).

The scale of change to the character and fabric of the site is expected to be medium during the construction stage, given that much of the site is under forestry, although tracks and infrastructure would be larger than those required for forest operations. The geographical extent of the effects of construction is limited to the site itself. The construction activities would be short-term, and once the Proposed Development becomes operational the construction activities would cease (at this point operational effect would take over). The magnitude of change to the fabric of the site and its character is judged to be medium. The effect of construction works on the site, its character and its fabric is considered to be significant (**moderate**) for the duration of the construction period.

Construction Effects on the Wider Area

The activities and part-built structures of the Proposed Development would be visible from the surrounding area as construction proceeds, with increasing presence (scale of change) in the landscape up to the completion of construction. The changes would be short-term and would cease (changing to operational effects) once the Proposed Development becomes operational. The magnitude of change, given the temporary nature of the works is judged to be low overall. Effects on the character of the surrounding landscape during the construction phase would be not significant (**minor**).

1.3 Decommissioning Stage

The effects at decommissioning stage will be similar to those at construction stage but decreasing as the works progress. However, given that structures will be removed and surface vegetation restored, the effect on the fabric of the site is judged to be not significant (**negligible decreasing to none on completion**).

2.0 Operational Effects on Surrounding Landscape Character Types

The site lies predominantly within the ‘Southern Uplands – Borders’ landscape character type (LCT 95) as set out in the NatureScot Landscape Character Types Map and Descriptions. The lower fringes to the south-east are within ‘Upland Valley with Pastoral Floor’ (LCT 113). The proposed turbines would all be located within Southern Uplands – Borders LCT, although the access track would descend into Upland Valley with Pastoral Floor LCT. The substation, BESS and compound areas would be located within Upland Valley with Pastoral Floor LCT, as would short sections of access track and the proposed new recreational heritage trail.

2.1 Scope of Assessment and Reporting

The assessment focusses on LCTs which are considered more likely to have significant effects as a result of the Proposed Development. The Zone of Theoretical Visibility (Figure 7.1) illustrates the spread and pattern of potential visibility across the 45 km study area and shows that visibility of the proposed turbines is constrained by the screening effect of the hills within the Southern Uplands, which reach heights of up to 700 m or 800 m AOD. The topography around the site limits potential views of the proposed turbines from lower elevations in the wider study area beyond approximately 10 km. Culter Fell to the north at 748 m AOD, and Hart Fell at 808 m AOD, located south of the Proposed Development also limit views beyond in those directions.

Based on the knowledge that effect decreases with distance, the LCTs with the potential to have significant effects are considered to be those within 10-15 km, as shown on Figure 7.4. Using the ZTV as an indicator of likely visibility, field work and an initial assessment of potential effects, Table 1 sets out the overview of LCTs within 15 km to focus the scope of the detailed assessment on those with likely significant effects.

Table 1 – Overview of Potential Effects on LCTs within 15 km

LCT	Approximate distance and direction	Discussion of potential visibility and likelihood of significant effects
LCT 95 Southern Uplands - Borders	Host	<ul style="list-style-type: none"> – Host LCT – Visibility across much of the LCT within 5 km, more limited further away. Considered in more detail below
LCT 113 Upland Valley with Pastoral Floor	Hosts lower fringes of site	<ul style="list-style-type: none"> – Part-host LCT – Visibility from within the Tweed Valley. Considered in more detail below.

LCT	Approximate distance and direction	Discussion of potential visibility and likelihood of significant effects
LCT 92 Plateau Outliers	12 km north-east	<ul style="list-style-type: none"> – Visibility from south-west facing slopes only, from over 12 km distance. – Significant effects are considered unlikely, not considered further.
LCT 102 Upland Fringe with Prominent Hills	12 km north	<ul style="list-style-type: none"> – Visibility from south-facing slopes only, from over 12 km distance. – Significant effects are considered unlikely, not considered further.
LCT 116 Upland Valley with Woodland	9.5 km north-east	<ul style="list-style-type: none"> – Visibility from this LCT would be extremely limited and from over 12 km distance. – Significant effects are unlikely, not considered further.
LCT 166 Upland Glens - Dumfries & Galloway	11 km south	<ul style="list-style-type: none"> – No visibility, not considered further.
LCT 176 Foothills with Forests – Dumfries and Galloway	10 km south	<ul style="list-style-type: none"> – Visibility from limited north facing slopes only, from over 10 km distance. – Significant effects are considered unlikely, not considered further.
LCT 177 Southern Uplands – Dumfries and Galloway	9.5 km south	<ul style="list-style-type: none"> – Visibility from this LCT would be very limited. From the Hart Fell unit there would be very limited visibility, to the west of the M74 corridor there would be more theoretical visibility but at over 12 km distance. – Significant effects are unlikely, not considered further.
LCT 209 Upland Glen – Glasgow and Clyde Valley	4 km north-west	<ul style="list-style-type: none"> – Visibility from this LCT would be extremely limited. – Significant effects are unlikely, not considered further.
LCT 210 Undulating Farmland and Hills	13 km north-west	<ul style="list-style-type: none"> – No visibility within 15 km – Significant effects are unlikely, not considered further.
LCT 213 Plateau Moorland	13 km west	<ul style="list-style-type: none"> – No visibility within 15 km – Significant effects are unlikely, not considered further.
LCT 217 Southern Uplands – Glasgow and Clyde Valley	2.5 km west	<ul style="list-style-type: none"> – This LCT is close to the site, but beyond the Glenwhappen Rig and Culter Cleuch Shank ridge, and the ZTV indicates that there would be very little visibility of the Proposed Development beyond this ridge. – This LCT hosts the Clyde group, and areas with theoretical visibility of the Proposed Development correspond with higher ridges that host existing turbines. – Significant effects are unlikely, not considered further.
LCT 218 Rounded Landmark Hills	13 km north-west	<ul style="list-style-type: none"> – Visibility from limited south-east facing slopes only, from over 13km distance. – Significant effects are considered unlikely, not considered further.

This analysis of visibility from different LCTs indicates that the assessment of potential effects on landscape character should focus on:

- LCT 95 Southern Uplands – Borders; and
- LCT 113 Upland Valley with Pastoral Floor.

2.2 Assessment of Effects

The assessment of potential effects on LCTs scoped into the assessment is set out below.
LCT 95: Southern Uplands - Borders

Context: There are extensive areas of Southern Uplands across the Scottish Borders, Dumfries and Galloway and South Lanarkshire. Although the landscape character continues across administrative boundaries, the LCT units remain divided along these lines. The ZTV indicates that the Proposed Development would be visible across parts of the Borders LCT but would have very limited visibility in Dumfries and Galloway and South Lanarkshire (see Figure 7.4 and Table 1). The assessment therefore focuses on the parts of Southern Uplands LCT within the Scottish Borders.

The LCT Southern Uplands - Borders includes the site, extending over hills (and smaller valleys) to Goseland Hill south-east of Biggar, south to Annandale Head above the Devil's Beef Tub. On the south-east side of the Tweed Valley, the LCT is extensive, extending beyond the Moffat Water Valley to the Ettrick Water Valley, and north to include the Megget Reservoir to the hills south of Peebles.

This extensive LCT includes part of the Clyde Group and Glenkerie Wind Farms, and Whitelaw Brae Wind Farm is under construction within it.

Baseline: Key characteristics from the LCT description include:

- *“Extensive, large scale rolling upland landscape with dome or cone-shaped summits and ridges.*
- *Glacial carved and smoothed landforms, including u-shaped valleys, hanging valleys and corries.*
- *Steep-sided valleys with numerous burns.*
- *Open, exposed character.*
- *Significant areas of peatland and heather moorland on higher slopes.*
- *Transition to rough grazing on lower slopes, with some sizeable areas of conifer woodland at base of main glens.*
- *Upland areas largely undeveloped, except for occasional upland farms.*
- *Reservoirs and roads in main glens.*
- *High degree of remoteness, wild character and grandeur of scale within the region.*
- *Wide ranging panoramic views from summits. (SNH, 2019)*

The LCT description notes that “*The Glenkerie and Clyde Wind Farms are prominent features on the western side of the A701*” and sets out that the landscape has ‘*occasional wind farms*’.

This is a large scale upland landscape in which existing wind farms form features in views from the broad hill tops and ridges as well as from within valleys.

Sensitivity: The LCT lies within the Tweedsmuir Uplands SLA, and the northern reaches lie within the Upper Tweed National Scenic Area (NSA). The Scottish Borders Supplementary Guidance (SBC, 2018) considered a much larger area than is covered by this LCT unit and found that this landscape was of medium landscape character sensitivity, and high value overall, in part because of the Southern Upland Way passing through that larger area, where it is outside this LCT unit. The value of the LCT is judged to be high for this assessment. This is an extensive LCT, although there are no other occurrences across the Scottish Borders area. The LCT hosts wind farms. The susceptibility of this large scale landscape to further wind farm development is judged to be medium. The LCT is judged to have high sensitivity to development.

Changes: The LCT would host the turbines of the Proposed Development, borrow pits, and access tracks to them (other parts of the Proposed Development would be within the adjacent LCT). The ZTV (see Figures 7.2 and 7.4) indicates that the theoretical visibility of the proposed turbines would be extensive over the ridge that hosts the site, and the south-facing slopes of the adjacent ridge to the north, Glenwhappen Rig to Glenlodd Hill. Visibility from that ridge extends to 3-4 km from the Proposed Development. Glenkerie Wind Farm is located on Glenlodd Hill. The ZTV extends south-westwards up the Tweed Valley to the ridge formed by Culter Cleuch Shank and Clyde Law, the edge of the LCT (within Scottish Borders), and a ridge occupied by Clyde group turbines. On the eastern side of the Tweed, theoretical visibility extends up slopes of the valley within approximately 5 km and on higher hill ridges extending south-westwards to approximately 10 km. In this direction, Whitelaw Brae is under construction and will be north of Craigmoid Hill. North-eastwards, the Proposed Development would be visible from high south-west facing slopes only, but including Broad Law and Dollar Law within 10 km.

The following viewpoints are within this LCT:

- VP1 A701 Source of the Tweed Layby;
- VP2 A701 near Craigmoid Hill;
- VP3 A701 Layby west of Glenbreck;
- VP4 A701 Layby east of Glenbreck;
- VP7 Track by Kingledoors Burn;
- VP9 Fruid Dam;
- VP10 Talla Dam car park;

- VP11 Talla Linn;
- VP12 Broad Law;
- VP13 Hartfell (at the edge of the LCT);
- VP14 Chalk Rig Edge on Annandale Way (at the edge of the LCT);
- VP16 Culter Fell (at the edge of the LCT); and
- VP20 Pykestone Hill.

The change to the site and the ridge that hosts it would be from a ridge with forest on the southern slopes, to one with forest, larger tracks and wind turbines. This would make it more similar to the Clyde, Glenkerie, or Whitelaw Brae sites.

With the Clyde group, Glenkerie, and Whitelaw Brae Wind Farms present on other ridges in the western part of the LCT, and 'occasional wind farms' mentioned as part of the key characteristics of the type (written prior to the consent for Whitelaw Brae), the changes as a result of the Proposed Development would not alter the character of the LCT as a whole, although alterations to the ridge itself would be as set out above. Across south-eastern slopes of the Tweed Valley, there would be views of more turbines (including those proposed) on the opposite (north-western) side; for upper parts of the valley south of Menzion, there would be additional turbines seen along the valley to the north, in the context of turbines either side of the upper valley (Clyde group and Whitelaw Brae). The proposed turbines would not be new features in the landscape, as existing turbines are present and visible from these areas. The valley floor areas below the site, from Menzion to Tweedsmuir and Hearthstanes are within the Upland Valley with Pastoral Floor LCT.

Overall, the magnitude of change would be medium for the ridge that hosts the site, and low for other areas of the LCT.

Effect: The sensitivity of the LCT was judged to be high on the basis of its inclusion in the SLA and northern fringes within the NSA. This, with the medium magnitude of change, is judged to result in an effect that would be significant for the ridge that would host the site within 3 km of the Proposed Development: significant (**moderate**). Effects on other parts of the LCT would be not significant (**minor**) within approximately 5 km, and not significant (**negligible**) beyond 5km.

LCT 113: Upland Valley with Pastoral Floor

Context: There are six areas of this LCT within the Scottish Borders area, relating to the major rivers which drain parts of the Southern Uplands. The two areas that occur within 15 km of the site are the Upper Tweed and Biggar Water; and the Manor Water south of Peebles. The southern edge of the site area extends into the Upper Tweed unit of the LCT, which includes the Tweed Valley floor from Menzion to the south-west of Tweedsmuir, down to Broughton and west to Biggar. The Manor Water unit of the LCT lies approximately 13 km away at its closest point, and has no theoretical visibility of the Proposed Development, and is not considered further.

The following viewpoints are within this LCT:

- VP5 A701 by Tweedsmuir Village Hall
- VP6 VP5 A701 by Stanhope
- VP8 Tweedsmuir Bridge

Baseline: Key characteristics from the LCT description include:

- *“Glaciated valleys with moderately to strongly sloping sides and flat floor modified by river bluffs and glacial moraine.*
- *Improved pastures with occasional small woodlands and tree lines on valley floors.*
- *Rough unimproved grazing, heather moorland or coniferous forest on valley sides.*
- *Scattered stone built villages with farmsteads and dwellings dispersed along river terraces, lower valley sides and tributary valleys.*
- *A simple, distinctive landscape strongly enclosed by uplands with intermittent long views along valley corridors” (SNH, 2019).*

This LCT includes constrained areas of landscape that are clearly defined by topography. The valleys are narrow, 1-1.5 km across, and transition to steep slopes of LCT 95 Southern Uplands – Borders except at the downstream edge, where the valleys change to other LCTs, including LCT 116 Upland Valley with Woodland. The LCT relates to the valley floors of U-shaped glacial valleys, with woodland on side slopes. The LCT units are accessed via roads that run along the valleys, typically running along the

edges of the valley floors. Settlement is scattered, but properties are often set on the edges of the valleys looking across. The Tweed Valley unit is typical of the LCT in these respects.

Sensitivity: The upper part of the LCT within the Tweed Valley is within the Tweedsmuir SLA, but the lower reaches lie within the Upper Tweed National Scenic Area (NSA). The Scottish Borders Supplementary Guidance (SBC, 2018) considered a similar area to this LCT unit and found it to be of medium/high landscape character sensitivity, and high value overall, due to the topography of the valley and the inclusion of part of the LCT within the NSA. The value of the LCT is judged to be high for this assessment. Characteristics of the landscape include small-scale enclosed valleys, with skylines sensitive to development. Existing wind farms are present and visible from the LCT, including the Clyde group and Glenkerie, which alter susceptibility. Whitelaw Brae is under construction to the south. Overall, the susceptibility is judged to be medium, and the sensitivity of the LCT is judged to be high.

Changes: The LCT would host the lowest fringe of the site with the access track junction at the A701 within the LCT, with the BESS, substation and proposed new recreational heritage trail a little up-slope at the edge of the LCT. The ZTV (see Figures 7.2 and 7.4) indicate that theoretical visibility of the proposed turbines would include parts of the Upper Tweed Valley between Menzion and Tweedsmuir, and around Stanhope, with greater visibility from the eastern side of the valley. The LCT is largely experienced from the A701 which runs along the western side but would have less visibility of the Proposed Development. It is noted that there is screening by woodland within the valley, such that actual visibility of the Proposed Development would be reduced. The area with theoretical visibility does not extend into the NSA (the northern section of the LCT downstream of Stanhope).

The proposed turbines would be large, moving, man-made structures set on the hills that form the north-western side of the Upper Tweed Valley. From within the valley the proposed turbines would be closer and would appear larger than the turbines of the Clyde group which are visible on the horizon up the valley (see VP8 at Tweedsmuir Bridge). Glenkerie turbines are visible from around Stanhope (see VP6).

The Proposed Development would bring turbines closer to the valley such that instead of turbines being seen in the distance (Clyde Group) or only briefly (Glenkerie), there would be turbines (of the Proposed Development) more visible on the slopes above the Tweedsmuir section of the valley. Although turbines are not new elements in the landscape, the Proposed Development would introduce readily visible turbines closer to Tweedsmuir and the LCT. For other sections of the Tweed Valley unit, there would be limited change to landscape character due to limited visibility and the presence of other wind farms in views. Overall, the magnitude of change would be high for the section of the Upper Tweed Valley south of Hearthstane; medium between Hearthstane and Stanhope; and low for other sections of the Upper Tweed unit of the LCT.

Effect: The sensitivity of the LCT was judged to be high on the basis of its inclusion in the NSA and the SLA and the form of the valley. This, with the high to medium magnitude of change, is judged to result in a significant (**major**) effect south of Heathstane (within approximately 4 km), and significant (**moderate**) effects between Hearthstane and Stanhope (within approximately 6 km). Effects on other parts of the Upper Tweed unit of the LCT would be not significant (**minor**).

2.3 Summary of Findings of Significant Effects

The findings of the above assessments of landscape effects are set out in Table 2.

Table 2 – Summary of Effects

LCT	Effect
Site and its landscape fabric during the construction phase	Significant (moderate)
Character of the surrounding landscape during the construction phase	Not significant (minor)
Site during decommissioning	Not significant (negligible decreasing to none on completion)
LCT 95: Southern Uplands - Borders	Significant (moderate) for the ridge that would host the site (within approximately 3 km)
LCT 113: Upland Valley with Pastoral Floor	Significant (major) Upper Tweed unit south of Hearthstane (within approximately 4 km) Significant (moderate) between Hearthstane and Stanhope (within approximately 6 km)

3.0 References

Scottish Natural Heritage (2019). *National Landscape Character Assessment*. Available at: <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment>. Accessed on: 16 May 2024.

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