

10 Cultural Heritage

Contents

10.1	Executive Summary	10-1
10.2	Introduction	10-1
10.3	Legislation, Policy and Guidelines	10-2
10.4	Consultation	10-3
10.5	Assessment Methodology and Significance Criteria	10-5
10.6	Baseline Conditions	10-10
10.7	Potential Effects	10-13
10.8	Mitigation	10-19
10.9	Residual Effects	10-20
10.10	Cumulative Assessment	10-20
10.11	Summary	10-22
10.12	References	10-24

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10 Cultural Heritage

10.1 Executive Summary

- 10.1.1 This chapter considers the environmental effects of the Proposed Development on cultural heritage (historic environment sites and features, archaeology and built heritage), describing the results of a desk-based assessment and site visits undertaken by CFA Archaeology Ltd (CFA). The assessment also takes into account comments provided in Scoping Opinions by Historic Environment Scotland (HES), South Lanarkshire Council (SLC) and East Ayrshire Council (EAC).
- 10.1.2 The baseline assessment has established that there are only three cultural heritage assets within the Proposed Development site boundary, each of which has been adversely affected by commercial forestry activity. These sites have all been avoided as far as possible by the design of the wind farm layout and mitigation has been proposed that would address any residual direct effects. Taking account of the current land-use and surrounding historic landscape character, the potential for further archaeological discoveries within the Proposed Development site is assessed as being low or negligible.
- 10.1.3 The assessment has considered the effect of the Proposed Development on the settings of heritage assets in the wider landscape following the approach approved by HES. One heritage asset (St Bride's Chapel etc) would receive an effect on its setting assessed as being of moderate significance (significant in EIA terms), although the predicted effect would not compromise the cultural significance or special interest of the monument. All other effects on the settings of heritage assets in the Outer Study Area are assessed as being not significant in EIA terms.
- 10.1.4 The cumulative effect resulting from the addition of the Proposed Development to the emerging baseline of operational, consented and in planning applications is assessed as being not significant.

10.2 Introduction

- 10.2.1 This chapter considers the environmental effects of the Proposed Development on cultural heritage (historic environment sites and features, archaeology and built heritage); hereafter referred to as 'heritage assets'. The chapter details the results of a desk-based assessment and field surveys undertaken by CFA Archaeology Ltd (CFA), and draws on comments provided by Historic Environment Scotland (HES), South Lanarkshire Council (SLC) and East Ayrshire Council (EAC) in Scoping Opinions.
- 10.2.2 The specific objectives of the study were to:
- Identify the cultural heritage baseline within and in the vicinity of the Proposed Development site.
 - Assess the site in terms of its archaeological potential.
 - Consider the effects of the construction, operation and decommissioning of the Proposed Development on heritage assets, within the context of the relevant legislation and planning guidance.
 - Consider the cumulative effects of the Proposed Development in combination with other existing or proposed developments, upon cultural heritage assets.
- 10.2.3 The assessment evaluates the effects of the Proposed Development on:
- World Heritage Sites;
 - Scheduled Monuments and other archaeological features;
 - Listed Buildings and other buildings of historic or architectural importance;

- Conservation Areas;
 - Gardens and Designed Landscapes; and,
 - Historic Battlefields.
- 10.2.4 It assesses the potential direct effects on assets within the Proposed Development site and the indirect effects of the Proposed Development on the settings of heritage assets in the wider landscape.
- 10.2.5 The assessment is supported by Figures 10.1 to 10.8 contained in EIA Report Volume 2.
- Figure 10.1 shows the Proposed Development layout together with the heritage assets identified within 1 km of the Proposed Development site. A gazetteer of these assets is provided as Appendix 10.1.
 - Figure 10.2 shows the turbine blade tip height Zone of Theoretical Visibility (ZTV) and the location of heritage assets within 5 km of the Proposed Development. A gazetteer of these sites is provided as Appendix 10.2, which includes a summary assessment of the predicted effects on their settings.
 - Figure 10.3 shows the turbine blade tip height Zone of Theoretical Visibility (ZTV) and the location of heritage assets of national and international importance within 15 km of the Proposed Development. A gazetteer of these sites is provided as Appendix 10.3, which includes a summary assessment of the predicted effects on their settings.
 - Figure 10.4 shows the locations of other cumulative developments together with nationally and internationally important heritage assets within the 15 km study area.
 - Figures 10.5 to 10.8 are visualisations showing the predicted visibility of the Proposed Development from heritage assets in the 15 km study area. The wirelines provided take no account of the screening effects of forestry or other woodland, hedges, trees and localised topographical features and so represent the potential worst case scenario.
- 10.2.6 Where relevant, cross-reference is also made to LVIA viewpoints, where these coincide with the locations of heritage assets within the wider landscape.

10.3 Legislation, Policy and Guidelines

Legislation

- 10.3.1 Relevant legislation and guidance documents have been reviewed and taken into account as part of this cultural heritage assessment. Of particular relevance are:
- The Ancient Monuments and Archaeological Areas Act 1979; and
 - Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997.

Planning Policy

- 10.3.2 Chapter 5 sets out the planning policy framework that is relevant to the EIA. The policies set out below include those from the South Lanarkshire Local Development Plan 2015 (SLLDP). This section also considers the relevant aspects of Scottish Planning Policy (SPP), Planning Advice Notes and other relevant guidance. Of relevance to the cultural heritage assessment presented within this chapter, regard has been had to the following policies:
- SPP Paragraphs 135-151;
 - SLLDP Policy 15: Natural and Historic Environment
 - SLLDP Policy 19: Renewable Energy

- SLLDP Supplementary guidance no 9: Natural and Historic Environment (Chapter 3: Historic Environment)
- SLLDP Supplementary guidance no 10: Renewable Energy

Guidance

10.3.3 Recognition has been taken of the following best practice guidelines/guidance:

- ClfA 2017 ‘Standard and Guidance for the Historic Environment Desk-Based Assessment’; and
- Historic Environment Scotland Policy Statement 2016 (HESPS)
- Historic Environment Scotland 2016 ‘Managing Change in the Historic Environment: Setting’.

10.4 Consultation

10.4.1 Historic Environment Scotland (HES), South Lanarkshire Council (SLC) and East Ayrshire Council (EAC) each provided Scoping Opinions. The responses relevant to the cultural heritage assessment are summarised in Table 10.1.

Table 10.1 – Scoping Consultation Responses

Consultee	Consultation Response	Applicant Action
HES Scoping Opinion (08/01/2019)	Confirmed that no heritage assets within HES remit are located within the development site boundary, and advised that the proposals may give rise to significant impacts on the setting of a number of heritage assets located within its vicinity.	Noted. The assessment of effects on setting follows the guidance provided by HES (Managing Change in the Historic Environment: Setting’ (2016)).
	Advised that HES is content with the methodology proposed for the assessment as set out in the scoping report.	Noted. The assessment of effects on cultural heritage follows the methodology set out in the Scoping Report (Chapter 7).
	Advised that the assessment pay particular attention to those heritage assets identified below. Douglas Village, Earl of Angus’ Monument (Category A listed building, LB1457) St Bride’s Chapel, including choir and memorial stones in churchyard, excluding scheduled monument SM90265, boundary walls and gatepiers (Category A listed building, LB1490)	Noted. Analysis of the blade tip height ZTV has established that there is no visibility from Thorril Castle, bastle house 450 m NNE of Parkhead (Scheduled Monument, SM5425) or from Glenbuck Ironworks, 470 m NW of Glenbuck Home Farm (Scheduled Monument, SM2931). For the remaining three assets, visualisations are provided to inform the assessment.

Consultee	Consultation Response	Applicant Action
	<p>St Bride's Church, Douglas (Scheduled Monument, SM90265)</p> <p>Thorril Castle, bastle house 450m NNE of Parkhead (Scheduled Monument, SM5425)</p> <p>Glenbuck Ironworks, 470 m NW of Glenbuck Home Farm (Scheduled Monument, SM2931)</p>	
	<p>Recommended that a Zone of Theoretical Visibility (ZTV) analysis is applied to the proposal to provide a basis for selecting sites in the wider area which should be assessed in any EIA.</p>	<p>Noted.</p> <p>The blade tip height ZTV (Figure 10.2) and the hub height ZTV have been used to assess the potential impacts of the Proposed Development on the setting of heritage assets following the approach set out in the Scoping Report.</p> <p>Tabulated assessments are provided in Appendices 10.2 and 10.3, which includes cross reference to appropriate visualisations where relevant.</p> <p>Where there is potential for the turbines to be visible from the key heritage assets listed above, visualisations have been prepared and are discussed in the text (paragraphs 10.7.9 to 10.7.38)</p>
	<p>Recommended that appropriate visualisations, such as photomontage and/ or wireframe views, should be provided where the impacts are likely to be highest.</p>	<p>Visualisations are provided for selected heritage assets including two of those highlighted by HES:</p> <p>St Bride's Chapel, including choir and memorial stones in churchyard, excluding Scheduled Monument SM90265, boundary walls and gatepiers (Category A listed building, LB1490)</p> <p>St Bride's Church, Douglas (Scheduled Monument, SM90265)</p> <p>A list of the visualisation Figures (10.5-10.9) is provided in Section 10.7.</p>

Consultee	Consultation Response	Applicant Action
		Cross reference is also made to a number of LVIA viewpoints, where these coincide with heritage assets and are informative of the visual impact on their settings. These are referenced where appropriate in the tabulated assessments in Appendices 10.2 and 10.3.
	Suggested that any cumulative impacts resulting from this development in combination with other existing and proposed wind farm developments within the surrounding area should be carefully considered.	Noted. Cumulative impacts are addressed in the chapter (Section 10.10).
South Lanarkshire Council Scoping Opinion (14/02/2019)	Expressed content with the topics, methodology and structure of the proposed EIA Report. Identified no concerns regarding archaeology and cultural heritage.	Noted. The assessment of effects on cultural heritage follows the methodology set out in the Scoping Report (Chapter 7). The assessment of effects on setting follows the guidance provided by HES (Managing Change in the Historic Environment: Setting' (2016)).
East Ayrshire Council Scoping Opinion (08/01/2019)	Agreed that three LVIA viewpoints within East Ayrshire VP 10 (Victory Park, Muirkirk); VP 14 (Nether Wellwood, A70); and VP 15 (Cairn Table) are appropriate viewpoints and should provided proportionate representation of the impact on East Ayrshire. Identified no concerns regarding archaeology and cultural heritage.	LVIA viewpoints VP 10 and VP 15 are representative of visibility from heritage assets within the Outer Study Area: Muirkirk, remains of tar works, mines and structures E of Garpel Water (SM6640) and Cairn Table, two cairns (SM4631) and are referenced in the tabulated assessment in Appendix 10.3.

10.5 Assessment Methodology and Significance Criteria

Study Area

- 10.5.1 Following the approach agreed through Scoping, the cultural heritage assessment has adopted the following three defined study areas:

- The 'Inner Study Area': extending 1 km from the outermost turbines of the Proposed Development, used to record all cultural heritage assets (designated and non-designated) identified during the desk-based assessment (DBA) (Appendix 10.1);
- The 'Middle Study Area': covering an area extending to 5 km from the outermost turbines of the Proposed Development, used to identify International, National and Regionally Important cultural heritage asset that could have their settings adversely affected by the Proposed Development. This includes Scheduled Monuments (SMs), Category A and Category B Listed Buildings, Conservation Areas and assets identified as Regionally or Nationally significant in the Council's Historic Environment Records (HER)¹ (Appendix 10.2); and
- The 'Outer Study Area': an area extending to 15 km from the outermost turbines of the Proposed Development, within which Internationally and Nationally important assets have been assessed through assessment of the ZTV (Appendix 10.3).

Desk Study

10.5.2 The following information sources were consulted as part of the desk-based assessment:

- Historic Environment Scotland Spatial Data Warehouse (HES 2019a): provided up-to-date data on the locations and extents of Scheduled Monuments, Listed Buildings, Conservation Areas, Inventory status Garden and Designed Landscapes and Inventory status Historic Battlefields.
- WoSAS Historic Environment Record (HER): a digital database extract was obtained from the HER for an area encompassing the Proposed Development Site and an area extending to 1 km from the site boundary, in order to inform the assessment of the archaeological potential of the Site.
- The National Record for the Historic Environment (NRHE; Canmore) (HES 2019b): for any information additional to that contained in the HER.
- Relevant bibliographic references were consulted to provide background and historic information.
- Map Library of the National Library of Scotland: for Ordnance Survey maps and other historical map resources.
- Historic Land-Use Assessment Data for Scotland (HLAMap) (HES 2019c): for information on the historic land use character of the Site and the surrounding area.

Site Visit

10.5.3 No field survey has been carried out. The Proposed Development lies entirely within commercial forestry plantation and the proposed access routes utilise existing coal and timber haul roads. The only heritage assets identified by the desk-based study lie within the current forestry coupes and have been planted over by forestry.

10.5.4 The locations of all three identified heritage assets have been avoided by the Proposed Development.

1.1.1

¹ Non-Statutory Register (NSR) sites were identified in some Local Authority areas through a project funded by Historic Scotland (now Historic Environment Scotland) in the 1980s aimed to identify sites that were potential candidates for Scheduling as be nationally important. In most cases, the designations have not been verified by further field inspections and Historic Environment Scotland does not rely solely, or mainly, on such designations when selecting sites for scheduling. Nevertheless, it is recognised that such designations in the HER denote potentially important archaeological sites and features and that they should be considered to be important assets. All NSR sites recorded in the HER have therefore been attributed a classification as being of Regional importance in accordance with the criteria set out in Table 10.2 and are assessed as such.

Assessment of Potential Effect Significance

Assigning Sensitivity to Heritage Assets

- 10.5.5 The assessment of sensitivity to change of cultural heritage assets reflects the relative weight given to them in HESPS and SPP. Table 10.2 summarises the relative sensitivity of those heritage assets relevant to the Proposed Development.

Table 10.2 – Sensitivity of Heritage Assets

Sensitivity of Heritage Asset	Asset Type
Very High	World Heritage Sites
High	Scheduled Monuments (and sites proposed for scheduling) Category A Listed Buildings Gardens and Designed Landscapes (listed in the Inventory) Historic Battlefields (listed in the Inventory) Some undesignated sites assessed as being of national importance
Medium	Category B Listed Buildings Conservation Areas Some undesignated sites assessed as being of regional importance
Low	Some undesignated sites assessed as being of local importance Category C Listed Buildings Unlisted buildings and townscapes with local (vernacular) characteristics
Negligible	Compromised sites already badly damaged, destroyed or those whose historic value is too minor for inclusion in a higher class

Assessing Magnitude of Impact

- 10.5.6 Criteria for assessing the magnitude of impact, which measures the degree of change to the baseline condition of an asset that would result from the Proposed Development, are presented in Table 10.3.

Table 10.3 – Magnitude of Impact

Magnitude	Criteria
Major	Change to most or all key cultural heritage materials, such that the resource is totally altered. Comprehensive changes to setting such that the ability to appreciate and understand the heritage asset is entirely compromised.
Moderate	Changes to many key cultural heritage materials, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset and severely affect the ability to appreciate and understand the asset
Minor	Changes to key cultural heritage materials, such that the asset is slightly altered. Slight changes to setting that will have a minor effect on the ability to appreciate and understand the asset.

Magnitude	Criteria
Negligible	Very minor changes to cultural heritage materials or setting.
No Change	No Change to the fabric or setting of a heritage asset

Criteria for Assessing the Significance of Effects

10.5.7 The sensitivity of the asset (Table 10.2) and the magnitude of the predicted impact (Table 10.3) are used to inform the professional judgment of the potential significance of the effects. Table 10.4 summarises the criteria for assigning significance of effects.

Table 10.4 – Significance of Effects

Sensitivity of Asset	Magnitude of Impact				
	Major	Moderate	Minor	Negligible	No Change
High/Very High	Major	Major	Moderate	Minor	Neutral
Medium	Moderate	Moderate	Minor	Negligible	Neutral
Low	Minor	Negligible/Minor	Negligible	Negligible	Neutral
Negligible	Minor	Negligible	Negligible	Negligible	Neutral

10.5.8 In the assessment that follows, Major and Moderate effects are considered to be ‘significant’ in the context of Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (Electricity Works Regulations). Minor or Negligible and Neutral effects are considered to be ‘not significant’.

Assessment of Effects on Setting

10.5.9 Historic Environment Scotland’s guidance document, 'Managing Change in the Historic Environment: Setting' (HES 2016), notes that:

“Setting can be important to the way in which historic structures or places are understood, appreciated and experienced. It can often be integral to a historic asset’s cultural significance.”

“Setting often extends beyond the property boundary or ‘curtilage’ of an individual historic asset into a broader landscape context”.

10.5.10 The guidance also advises that:

“If proposed development is likely to affect the setting of a key historic asset, an objective written assessment should be prepared by the applicant to inform the decision-making process. The conclusions should take into account the significance of the asset and its setting and attempt to quantify the extent of any impact. The methodology and level of information should be tailored to the circumstances of each case”.

10.5.11 The guidance recommends that there are three stages in assessing the impact of a development on the setting of a historic asset or place:

- Stage 1: identify the historic assets that might be affected by the proposed development;
- Stage 2: define and analyse the setting by establishing how the surroundings contribute to the ways in which the historic asset or place is understood, appreciated and experienced; and,
- Stage 3: evaluate the potential impact of the proposed changes on the setting, and the extent to which any negative impacts can be mitigated.

10.5.12 Following this approach, the assessment adopts a four stage approach:

- Identification of the characteristics of the setting of the asset;

- Assessment of the sensitivity of that setting;
 - Identification of how the presence of the proposed wind farm would affect that setting (magnitude of impact); and,
 - Assessment of the significance of the effect.
- 10.5.13 The turbine blade tip height ZTV for the Proposed Development was used to identify those heritage assets from which there would be theoretical visibility of one or more of the proposed wind turbines.
- 10.5.14 World Heritage Sites, Scheduled Monuments, nationally important heritage assets (as designated in the HER), Listed Buildings, Conservation Areas, Inventory status Gardens and Designed Landscapes and Inventory status Historic Battlefields, where present within the blade tip height ZTV are included in the assessment. These assets are included in the tabulated assessments in Appendices 10.2 and 10.3 and they are shown on Figures 10.2 and 10.3.
- 10.5.15 Where it has been determined that the setting of an asset is such that there is no potential for it to be affected by the presence of the Proposed Development (including all assets of negligible sensitivity), the asset has not been considered further. For the remaining assets, the magnitude of impact on the setting was assessed according to the thresholds in set out in Table 10.3.

Cumulative Assessment

- 10.5.16 The assessment of cumulative effects on heritage assets is based upon consideration of the effects of the Proposed Development on the settings of assets with statutory designations and non-statutory designations, in addition to the likely effects of other operational, under construction, consented and proposed (at the application stage) developments.
- 10.5.17 The assessment takes into account the relative scale (i.e. size and number of turbines) of the identified developments, their distance from the affected assets, and the potential degree of visibility of the various developments from the assets under consideration.

Requirements for Mitigation

- 10.5.18 Planning Advice Note 1/2013: Environmental Impact Assessment (PAN1/2013) describes mitigation as a hierarchy of measures: prevention, reduction, compensatory (offset) measures. Prevention and reduction measures can be achieved through design, whilst compensatory measures can offset impacts that have not been prevented or reduced through design.
- 10.5.19 The emphasis in Planning Advice Note (PAN) 2/2011: Planning and Archaeology (PAN2) is for the preservation of important remains in situ where practicable and by record where preservation is not possible. The mitigation measures presented below (paragraphs 10.8.1 to 10.8.8) therefore take into account this planning guidance and provide various options for protection or recording and ensuring that, where practical, surviving assets are preserved intact to retain the present historic elements of the landscape.

Assessment of Residual Effect Significance

- 10.5.20 The assessment of the significance of residual effects takes into account the mitigation proposed and the effectiveness of that mitigation to avoid, reduce or offset the predicted effects. Where a predicted impact is avoided, through micro-siting the Proposed Development to avoid the impact, this would result in no residual effect. Where an asset cannot be avoided but where the proposed mitigation would ensure that the affected asset is subject to an appropriate level of archaeological investigation and recording, resulting in its preservation by record, the significance of residual effect is accordingly reduced. Where an asset (usually one of little or no heritage importance and negligible sensitivity) is lost without any mitigation, the residual effect remains the same as the predicted effect; in all such cases the residual effect (major magnitude impact (Table 10.3) on an asset of negligible sensitivity (Table 10.2)) would be no more than minor adverse (not significant in EIA terms).

Limitations to Assessment

- 10.5.21 The assessment relies on the results of a desk-based assessment and uses data derived from the WoSAS HER and the NRHE. It is assumed that the data was up-to-date at the time it was acquired.
- 10.5.22 The desk-based assessment draws on evidence taken from historic maps and the grid co-ordinates attributed to those taken from Gen Roy's Military Survey of Scotland Map (1747-55) in particular are approximations only; based on a professional interpretation of topographic relationships derived from examination of the map.

10.6 Baseline Conditions

Heritage Assets within the Inner Study Area (Figure 10.1; Appendix 10.1)

Prehistoric Period

- 10.6.1 A circular enclosure (10142), 27.5 m in diameter, defined by a bank measuring 2.8 m in width and 0.4 m in height, and an internal ditch measuring 1.5 m in width, with a possible entrance in its east side, may be of prehistoric date. The enclosure is recorded in the HER as being probably of national importance. It lies within the forestry plantation on Arkney Hill and its remains have been planted over with commercial forestry.
- 10.6.2 It is unlikely that the remains have survived undisturbed within this commercial forestry environment and the enclosure is accordingly assessed to be of no more than regional heritage importance and medium sensitivity.
- 10.6.3 A possible prehistoric cairn (66516) was recorded as having been identified on an aerial photograph taken in 1946. However, the cairn lies within an area where evidence for post-medieval cultivation is also evident and it is possible that it could alternatively be related to post-medieval field clearance. In the absence of any definitive evidence as to its date or function, it is assessed as being of unknown heritage importance and unknown sensitivity.

Medieval/Post-medieval settlement

- 10.6.4 Six named post-medieval farmsteads have been identified within the Inner Study Area by the desk-based assessment: 'Longhill' (17330); 'Erkney Hill' (DWE01); 'Stand Burn' (DWE03); 'Aller Burn' (DWE04); 'Brackenside' (DWE06); and, 'Brockley' (DWE07). Remains of a further probable farmstead (66514), which does not conform to any settlement mapped on Ordnance Survey maps or Roy's Military Survey map, are also recorded in the HER. This farmstead was identified from historic aerial photographs (1946) and traces of earthwork remains of possible structures are also visible on modern aerial photographs.
- 10.6.5 Five of these farmsteads are shown on Gen Roy's Military Survey of Scotland map (1747-55) and they are evidently of at least 18th century date; 'Brackenside' (DWE06) is the only one of the six not shown on Roy's map. 'Longhill' (17330) is shown on the Ordnance Survey 1st edition map (1864) but not on the 2nd edition map (1896). 'Stand Burn' (DWE03) is shown on Forrest's map (1816) but not on the Ordnance Survey 1st edition map (1864). A farmstead named as 'Alderburn' (which may be an alternative spelling for 'Aller Burn' (DWE04)) is shown on the Ordnance Survey 1st edition map (1864). 'Erkney Hill' (DWE01) is not shown on any maps other than Roy's. 'Brackenside' (DWE06) is the only one of the six named farmsteads of which any remains are visible on modern aerial photography but remains are also visible of a second, un-named, farmstead (66514).
- 10.6.6 As sites of historic farming settlement, these are all assessed as being of no more than local heritage importance and low sensitivity.

Sheepfolds/enclosures

- 10.6.7 A roughly oval enclosure (17329/41262), recorded on the Ordnance Survey 1st edition map (1864), remains of which are visible on modern aerial photography, may be a large stock enclosure. Three other sheepfolds (58096, 58097 and 58098) are recorded in the HER. Two of these (58096 and

58098) were identified as being shown on the Ordnance Survey 1st edition map (1864) and one (58097) as being identified on aerial photography. Two of these (58096 and 58097) are visible as surviving remains on modern aerial photography. A further sheepfold (DWE02) was identified by this study as being shown on the Ordnance Survey 1st edition (1864) map but not on the 2nd edition (1896). As minor relicts of 19th and 20th century stock management these are all assessed as being of little or no heritage importance and of negligible sensitivity.

Cultivation and Fields

- 10.6.8 An extensive area of rig and furrow cultivation (DWE05) is visible, on the northwest side of the Aller Burn, on modern aerial photography. The cultivation, which covers an area of at least 50 ha roughly coincides with the 18th century farmsteads of 'Stand Burn' (DWE03) and 'Aller Burn' (DWE04) and comprises a number of plots or fields.
- 10.6.9 A further area of rig and furrow cultivation (66153), around 'Brackenside' farmstead (DWE06), is recorded in the HER as having been identified as visible on an aerial photograph taken in 1946; although no remains are visible on modern aerial photography.
- 10.6.10 As evidence of cultivation of probable 18th century date the rig and furrow remains are assessed as being of local heritage importance and low sensitivity.

Industrial Remains

- 10.6.11 Two former mines (41009 and 41037) and a former terrace of miners housing (58095) no longer exist, having been lost to later 20th century opencast coal mining operations. The former mines are both shown on the Ordnance Survey 1st edition map (1864) while the former miners housing is shown first on the Ordnance Survey 2nd edition map (1896). Mining is also recorded on Roy's map (1747-55) where 'Cole Pits' are marked on the maps, to the northeast of 'Broakly' (Brockley), on the north bank of the Poniel Water.
- 10.6.12 There are no surviving remains of this historic mining and these sites are accordingly assessed as being of little or no heritage importance and of negligible sensitivity.

Miscellaneous Remains

- 10.6.13 Three HER entries relate to cropmark sites (15765, 15766 and 15767) identified through desk-based assessment during previous studies but not subsequently located on the ground by field survey. These cropmarks, attributed to being possibly the result of differential vegetation growth are assessed as being of little or no heritage importance and of negligible sensitivity.
- 10.6.14 Remains of a former rifle range (58099), shown on the 1912 Ordnance Survey map and still visible as earthwork features on modern aerial photography is likely to represent a former military training facility and is assessed as being of local heritage importance and low sensitivity.
- 10.6.15 A cluster of at least 12 small circular features (66515) visible on the southern bank of the Poniel Water on an aerial photograph taken in 1946 are described in the HER as being either field clearance cairns associated with cultivation, or alternatively as possibly being collapsed bell-pits associated with early coal mining activities. In either case, as evidence of either former cultivation or mining, they are assessed as potentially being of local heritage importance and low sensitivity.

Historic Landscape Character

- 10.6.16 The Proposed Development is located within a commercial forestry plantation (Cumberhead Forest). There are former opencast coal mines to the north and operational wind farms to the south. There are areas of rough grazing pasture to the south, east (restored opencast) and to the southeast. The rough grazing to the southeast, along the Aller Burn contains relict rig and furrow cultivation and the area has been settled since at least the mid 18th century; farmsteads and cultivation being shown on Gen Roy's Military Survey of Scotland map (1747-55). Roy's map also marks 'Cole Pits' north of the Poniel Water, showing that small scale coal mining was already being carried out in the area at that date.

- 10.6.17 The OSA records that “the lands are mostly laid out in sheep farms” (p77), arable farming being limited to the strath and the banks along the river (Douglas Water). The OSA also records that the parish “abounds in coal, which will be inexhaustible for many centuries” (p78). It also records that “coal is the principal fuel here” (p78); providing evidence that the seams were already being extensively worked at the end of the 18th century. Cotton spinning and weaving was also established in Douglas in the latter part of the 18th century (p81). The OSA also records that “the old castle of Douglas was burnt by accident about 33 years ago” (i.e. ca 1860) (p 85). Finally, the OSA records that “Lord Douglas, upwards of 20 years ago (i.e. prior to 1773), planted about 300 acres: and within the last 10 or 11 years, above 800 acres more, with oaks, elms, beech, planes, ashes and firs of different kinds; which in a few years will have a fine effect to beautify and shelter this part of the country.” (p78). The relics of the planting described in the OSA are presumably those recorded in HLA Map as the relict designed landscape around the old Douglas Castle. The NSA additionally records that, at the time of its compilation, “his Lordship [Lord Douglas] is carrying on these plantations on a large scale, [and] the aspect of the parish will be progressively improved for many years” (NSA p478).
- 10.6.18 Douglas Castle, a Category C Listed Building (LB1449) of which only a single round tower survives, was the inspiration for the 1831 novel ‘Castle Dangerous’ by Sir Walter Scott and was the former family seat of the British Prime Minister, Alec Douglas-Home.

Archaeological Potential

- 10.6.19 The Proposed Development lies almost exclusively within the confines of the commercial forestry plantation (Cumberhead Forest), with access being gained from the east, along an existing coal haul road, and south (for timber removal only), along an existing timber haul road (Figure 10.1). There are only three known heritage assets within this forested area: an enclosure (10142) of possible prehistoric date; ‘Erkney Hill’ farmstead (DWE01), of probable 18th century date; and a sheepfold (DWE02) of late 19th century date. It is probable that forestry operations have had a detrimental impact on these recorded sites and that any remains do not survive in undisturbed condition.
- 10.6.20 Taking account of the current land-use, the potential for further archaeological discoveries within the Proposed Development site is assessed as being low or negligible.

Heritage Assets within 5 km of the Proposed Development (Figure 10.2; Appendix 10.2)

- 10.6.21 There are two Scheduled Monuments (St Brides Church, Douglas (SM90265) and Glenbuck Ironworks, 470 m NW of Glenbuck Home Farm (SM2931)) within 5 km of the Proposed Development. In addition, there are two heritage assets in the HER given NSR attributes of Code V (probably of national importance). One of these (10142) is an enclosure of possible prehistoric date that has been subsumed within a forestry plantation and in all probability has not survived undamaged; the other (10061) is a rectangular earthwork, enclosed by a single ditch and outer bank with a possible entrance in the west side. The earthwork is of unknown date or function but lies close to an alleged Roman road.
- 10.6.22 There are two Category A Listed Buildings (St Brides Chapel (LB1490) and the Earl of Angus’ Monument (LB1457)) within 5 km of the Proposed Development; both of which lie within the Conservations Area defining the historic medieval core of Douglas. There are also 15 Category B Listed Buildings within 5 km of the Proposed Development; five of which lie within the urban setting of Douglas. There are 18 Category C Listed Buildings within 5 km of the Proposed Development; 14 of which lie within the urban setting of Douglas. One of the Category C Listed Buildings is the standing remains of Douglas Castle (LB1449), a locally promoted visitor attraction.

Heritage Assets within 15 km of the Proposed Development (Figure 10.3; Appendix 10.3)

- 10.6.23 Within 15 km of the Proposed Development there are 46 Scheduled Monuments, including two (St Bride’s Church (SM90265) and Glenbuck Ironworks (SM2931)) that are within 5 km. New Lanark Mill

Number four (SM12701) is also an integral part of the New Lanark World Heritage Site (WHS). Twenty-nine of the recorded Scheduled Monuments are of prehistoric date and include 15 ritual and funerary monuments and 14 classified as domestic and defensive monuments (settlement remains). Seven of the Scheduled Monuments are of probable medieval/early post-medieval date. Five of the Scheduled Monuments are industrial remains, of 18th/19th century date.

10.6.24 Within 15 km of the Proposed Development there are 38 Category A Listed Buildings, including the two described above within 5 km at Douglas. The majority of the Category A Listed Buildings lie within and are integral components of the New Lanark WHS.

10.6.25 New Lanark WHS is a restored 18th-century cotton mill village on the banks of the River Clyde. It was created as a cotton-spinning village in the late 18th to early 19th century and was transformed under the management of Robert Owen. Owen greatly improved the conditions, facilities and services for the workers and their families and his work at New Lanark influenced many 19th century social improvements including: progressive education; factory reform; more humane working practices; and, garden cities.

10.7 Potential Effects

Construction

10.7.1 Any ground breaking activities associated with the construction of the Proposed Development (such as those required for turbine bases and crane hardstandings, access tracks, cable routes, compounds and borrow pits) have the potential to disturb or destroy heritage assets. Other construction activities, such as vehicle movements, soil and overburden storage and landscaping also have the potential to cause direct, permanent and irreversible impacts on heritage assets.

10.7.2 The Proposed Development layout has been designed to avoid impacts on heritage assets as far as possible (Figure 10.1) and none of the heritage assets identified by the desk-based assessment would be directly affected by construction works associated with the Proposed Development.

10.7.3 There is however some uncertainty regarding the location of one of the heritage assets identified through examination of historic maps. The location of 'Erkny Hill' farmstead (DWE01), as shown on Figure 10.1 is derived from examination of Gen Roy's Military Survey of Scotland Map and its placement on Figure 10.1 is based on a professional estimation only. There are no visible remains on modern aerial photographic imagery outwith the commercial forestry on Arkney Hill and no remains have been previously recorded on the open moorland that could represent the former farmstead. It is therefore probable that the farmstead occupied a location that is now subsumed within the commercial forestry and that any remains that may have survived the abandonment of the farmstead have been destroyed, or at least appreciably detrimentally affected, by forestry activities (drainage, ploughing and planting work). However, the possibility of some remains surviving cannot be entirely discounted.

10.7.4 Any surviving remains of 'Erkny Hill' farmstead are likely to be of no more than negligible sensitivity and any direct impact on those remains of no more than minor magnitude. Consequently, it is assessed that any direct impact on 'Erkny Hill' farmstead (DWE01) would be of **negligible** significance (**not significant** in EIA terms).

Operation

10.7.5 The assessment of operational effects on the settings of heritage assets has been carried out with reference to the layout of the Proposed Development and locations of the cultural heritage assets, shown on Figures 10.2 and 10.3. The criteria detailed in Tables 10.2 to 10.4 have been used to assess the nature and magnitude of the predicted impacts and the resultant significance of the effects. The assessment is set out in tabulated form in Appendices 10.2 and 10.3.

10.7.6 Visualisations that inform the assessment are provided for selected assets as listed in Table 10.5 below. The selection of these is based on a combination of the advice from HES (see Table 10.1), their proximity to the Proposed Development and initial appraisal of the blade tip height ZTV. The

wirelines include the operational and under-construction wind farms that constitute the present baseline and also include consented and proposed developments (where applicable) that are part of the potential cumulative baseline.

- 10.7.7 In addition to the specific cultural heritage visualisations listed in Table 10.5, a number of LVIA viewpoints coincide with the locations of heritage assets in the Outer Study Area. These have also been used to inform the assessments and the relevant viewpoints are also listed in Table 10.5, for ease of reference.
- 10.7.8 Reference to the supporting wireframe visualisations, and where relevant, the LVIA viewpoints is provided in the final column of Appendices 10.2 and 10.3.

Table 10.5 – Cultural Heritage Visualisation Viewpoints

Figure Ref.	Figure Title - Site Name (& Ref No)
Figure 10.5	Douglas Village, Earl of Angus' Monument (LB1457)
Figure 10.6	St Bride's Chapel, including choir and memorial stones in churchyard, excluding scheduled monument SM90265, boundary walls and gatepiers (LB1490)
Figure 10.7	Douglas Parish Church (LB1456)
Figure 10.8	Wildshaw Hill Cairn (SM4511)
LVIA VP 3	Douglas Castle (LB1449)
LVIA VP 7	Hyndford Bridge (LB13055)
LVIA VP 8	Tinto Cairn, cairn on summit of Tinto Hill (SM4660)
LVIA VP 10	Victory Park Muirkirk (representative of Muirkirk, remains of tar works, mines and structures E of Garpel Water (SM6640))
LVIA VP 11	Cairn Kinny (SM4275)
LVIA VP 13	Auchensaugh Hill, cairn (SM4234)
LVIA VP 15	Cairn Table, two cairns (SM4631)
LVIA VP 16	Douglas (outskirts of Conservation Area)

Inner Study Area

- 10.7.9 There is one heritage asset (10142), an enclosure potentially of prehistoric date, recorded in the HER as being potentially of national importance, that lies within the Inner Study Area (Figure 10.1) and has a setting potentially sensitive to change.
- 10.7.10 The enclosure lies within and is planted over with commercial forestry. It is very unlikely that the archaeological integrity of the asset survives intact and it is not likely that the remains would meet the requirements for designation as a Scheduled Monument. It has therefore been assessed as being of no more than regional importance, but still of medium sensitivity. It is currently covered by and concealed within a commercial forestry plantation but nevertheless lies on a north facing slope close to a tributary of Shiel Burn. As the function (or indeed the date) of the enclosure is unknown it is difficult to identify what the important aspects of its setting might be; although its proximity to the watercourse and its north-facing aspect are evidently of some interest in that regard.
- 10.7.11 The closest of the proposed turbines (T10) would be located 835 m to the east of the enclosure but would not be visible from it due to the screening effects of the current forestry. The wind farm layout has been designed so as not to encroach closely upon the setting of the enclosure and the commercial forestry would be retained and managed under the Proposed Development Forest Plan (Chapter 16). The enclosure's association with the adjacent watercourse would not be affected by

the Proposed Development and the impact of the Proposed Development on the setting of the enclosure is assessed as being of no more than minor magnitude. For an asset of medium sensitivity, the resultant effect is assessed as being of **minor** significance (not significant in EIA terms).

Middle Study Area

- 10.7.12 Within the Middle Study Area (Figure 10.2), there is a cluster of Listed Buildings and a Scheduled Monument within the Conservation Area at Douglas. Outside of Douglas there are a number of individual listed buildings, all of which have fairly localised settings. These include farmhouses and farmsteads, lodges and small residential houses, most of which lie in close proximity to the M74 and have enclosed or screened settings. Analysis of the blade tip height and hub height ZTVs predict that, in the absence of any screening from woodland trees, vegetation of built environment features there would be theoretical visibility of 10-13 turbines from all of the designated heritage assets with the Middle Study Area.
- 10.7.13 The tabulated assessment (Appendix 7.3) for each of those assets that lie outside of Douglas predicts an impact on their settings of no more than negligible magnitude, resulting in effects of **negligible** significance in each case (not significant in EIA terms).
- 10.7.14 Three heritage assets within Douglas (Earl of Angus' Monument (LB1457), St Bride's Chapel (LB1490) and St Bride's Church (SM90265)) were identified by HES as assets that should be specifically assessed for impacts on their settings. These assets lie within the Conservation Area at Douglas, which itself is a statutory designation and so warrants assessment. There is no visibility of the Proposed Development from Glenbuck Ironworks (SM2931), or its near vicinity (Figure 10.2), therefore the impact of the Proposed Development on its setting is not considered further.

Douglas Village, Earl of Angus' Monument (LB1457)

- 10.7.15 The Earl of Angus' Monument is a bronze statue of James, Earl of Angus, mounted on a plinth and commemorates the 200th anniversary of the raising of the Cameronian regiment by the Earl. It is set within a small formal park, bounded on the northwest side by a small copse of woodland and to the south and east by housing. There is an open aspect to the north from the park, over sports fields to the Douglas Water valley. The monument is a Category A Listed Building and is an asset of high sensitivity; although the important aspect of its setting is its place within a small park on the outskirts of Douglas and its open association with the Douglas Water valley to the north.
- 10.7.16 A photo-wireline visualisation (Figure 10.5) shows that significant screening of the Proposed Development is provided by the copse of woodland bounding the northwest side of the park, and the Long Plantation which lies beyond. The nearest turbine (T13) would be 2.4 km distant, screened by a combination of the copse of woodland, the near horizon and the Long Plantation on the far side of the Douglas Water valley. The Hagshaw Hill Wind Farm is an existing feature in wider views from this locality.
- 10.7.17 The Proposed Development would introduce additional turbines into the surrounding landscape but they would not intrude into the localised enclosed park setting of the monument. The open vista to the north, looking out onto the Douglas Water would not be affected and the impact on the monument's setting is assessed as being of no more than negligible magnitude, resulting in an effect of **negligible** significance (not significant in EIA terms).

St Bride's Chapel (LB1490) and St Bride's Church (SM90265)

- 10.7.18 St Bride's Chapel (LB1490) is a single storey, late 13th or 14th century Gothic church and a Category A Listed Building. It stands on the same site as and directly adjoining the remains of St Bride's Church (SM90265), a medieval church closely associated with the Douglas family and a Scheduled Monument. Both are set within an extensive surrounding burial ground which may contain burials from the earliest (12th century) period of the church's history. The close association with the Douglas family means that the chapel, church and burial ground have an associative link with Douglas Castle (LB1449), remains of which stand in the Douglas water valley around 1 km to the northeast; although the two sites are no longer intervisible due to the presence of intervening later buildings and woodland. The burial ground is enclosed by historic townscape buildings to the west,

south and east; there is an open aspect to the north, over sports fields to the Douglas Water valley. Apart from the tip of the bell tower, the chapel does not have a pronounced visible presence in views in and around the town and, as such its setting is both secluded and localised.

- 10.7.19 Figure 10.6 provides a photo-wireline visualisation showing the screening effect of the trees within and around the periphery of the burial ground and the buildings along its western boundary. In the absence of the landscape screening within the burial ground, the Proposed Development would be visible to the west above and beyond the Long Plantation. The nearest turbine within the Proposed Development (T13) would be 2.5 km distant, partly screened by a combination of the mature vegetation within the burial ground, the near horizon and the Long Plantation on the far side of the Douglas Water valley. Hagshaw Hill Wind Farm is an existing feature of that view, albeit at greater distance than the Proposed Development and more screened from view. LVIA VP 16 provides a photomontage of the more open views from outside and to the north of the burial ground.
- 10.7.20 The Proposed Development would introduce additional turbines into the surrounding landscape beyond the immediate Douglas Water valley but they would not intrude appreciably onto the localised setting of the chapel and church. The open vista to the north from the burial ground, looking out onto the Douglas Water would be retained although some turbines would be visible above and beyond the horizon on the far side of the valley. Taking account of the screening provided by trees and historic buildings around the burial ground, the impact on the setting of the chapel and church is assessed as being of no more than minor magnitude. For an asset of high sensitivity, the resultant effect is assessed as being of **moderate** significance (significant in EIA terms) but not to an extent that the cultural significance of the monument or the special interest of the chapel would be compromised.

Douglas Conservation Area

- 10.7.21 The Conservation Area at Douglas covers the historic core of the village to the north of the A70 Ayr Road and includes a few properties to the south side of that modern main road through the town. The Conservation Area is defined by an organic street pattern, with numerous streets and closes running at varying angles to both Main Street and Ayr Road. The village has strong historical connections with the Douglas family and has its roots in the medieval period, although most of the current buildings are of 18th or 19th century date. Notable buildings include St Bride's chapel and former church, at the north end of the Conservation Area, and the later, 18th century, Parish Church, which was altered and added to in the course of the 19th century. The Parish Church occupies an elevated prominent position at the east side of the Conservation Area overlooking the earlier church site below and to the west. The streets within the Conservation Area are mostly narrow and views through the historic core are consequently constrained. From the elevated viewpoints along Ayr Road views across the Conservation Area extend to include the Douglas Water valley beyond the town. Hagshaw Hill Wind Farm is visible on the hill side to the west of the village.
- 10.7.22 Figure 10.7 provides a wireline view from Douglas Parish Church and LVIA VP 16 provides a photomontage of the view of the Proposed Development from Crabtree Street on the northern edge of the Conservation Area. These show that from the higher elevation around the Parish Church all 13 turbines would be visible at hub height on and beyond the skyline in the view to the northwest. Hagshaw Hill Wind Farm is an existing feature of that view and is also visible along the skyline. The nearest turbine within the Proposed Development to that viewpoint (T13) would be 2.6 km distant. LVIA VP 16 shows the relationship between the Proposed Development and the existing Hagshaw Hill Wind Farm, viewed from the lower part of the Conservation Area around its north edge. These locations are two of the few locations within the Conservation Area where clear views towards the Proposed Development can be obtained. From the majority of the Conservation Area there are limited views outwards and of the wider landscape to the west.
- 10.7.23 The Proposed Development would introduce turbines into the surrounding landscape but they would not intrude appreciably into the views through and around the Conservation Area. The presence of the Proposed Development in views across the Conservation Area from the higher ground along Ayr Road would include the Proposed Development but the proposed turbines would be visually separated from views of the townscape by the topography of the broad valley landscape

and the tree lined hillside beyond. Taking account of the variability of the views in, around and through the historic townscape, the impact on the character and setting of Douglas Conservation Area is assessed as being of no more than minor magnitude. For an asset of medium sensitivity, the resultant effect is assessed as being of **minor** significance (not significant in EIA terms); in particular, the intrinsic character of the Conservation Area would not be compromised.

Douglas Castle (LB1449)

- 10.7.24 All that remains of the 17th century Douglas Castle, demolished in 1938 due to adverse effects from mining subsidence, is a ruined corner tower. The tower stands on a prominent rise in the valley, to the south of the river, from where there are long views southwest and northeast along the Douglas Water valley. Sir Walter Scott used the location and early history of Castle Douglas as the inspiration for his 1831 novel 'Castle Dangerous' and the castle is still sometimes referred to by this alternative name. The castle is also renowned as being the former family seat of the British Prime Minister, Alec Douglas-Home (Douglas Archive website). The Castle also has strong historical association with medieval township at Douglas to the southwest and is surrounded by the remnants of its former designed landscape and various associated features (such the walled garden on the north side of the Douglas Water and the curling pond and lakes on the south side of the river). Some parkland trees and copses of woodland also survive and the setting retains something of its former agricultural parkland character.
- 10.7.25 LVIA VP 3 provides a photomontage of the view of the Proposed Development from Douglas Castle and shows that the Proposed Development is partially screened by the existing forestry of the Long Plantation and the topography of the rising ground west of the Douglas Water. The existing Hagshaw Hill Wind Farm is an existing feature of that view, further to the south west on the hillside beyond the Long Plantation.
- 10.7.26 The Proposed Development would introduce additional turbines into the surrounding landscape but they would not intrude into the localised former designed landscape setting of the Castle. The open vista to the northeast and southwest along the Douglas water valley would be retained and the deciduous woodland of the Long Plantation would provide some screening of the towers of the nearest turbines and the hubs of some of those further behind the skyline. The impact on the Castle's setting is assessed as being of minor magnitude, resulting in an effect of **negligible** significance (not significant in EIA terms) and not to an extent that the cultural significance of the monument or the special interest of the remains of the Castle would be compromised.

Outer Study Area

- 10.7.27 Within the outer study area there are several Bronze Age burial cairns that occupy prominent hill top positions from where there are wide ranging and commanding views. Many of these share intervisibility and they all appear to have views of the most prominent landmark burial cairn on the summit of Tinto Hill. For most of these monuments the Proposed Development would not lie in direct line of sight between intervisible cairns and the views of Tinto Hill from the individual cairns would not be interrupted. As such, the key aspect of their settings would be unaffected. The cairns would also retain their individual prominence in the surrounding landscape and views of the cairns from the wider surroundings would not be compromised by the Proposed Development. Visualisations are provided from several of these, which show the visibility of the Proposed Development in views from the cairns:
- Auchensaugh Hill, cairn (SM4234), the closest to the Proposed Development, lies 6.3 km to the southeast and is represented by the photomontage in LVIA VP 13. The wireline accompanying the photomontage indicates that all 13 turbines would be visible at hub height.
 - Wildshaw Hill Cairn (SM4511) is 9 km to the east southeast of the Proposed Development and is represented by a wireline on Figure 10.8. The wireline indicates that 11 turbines would be visible at hub height and a further two at tip height.
- 10.7.28 These two cairns share intervisibility and views to Tinto Hill Cairn (SM4660), but in both cases that intervisibility and view to Tinto Hill would be unaffected by the Proposed Development. Although

the Proposed Development would be visible from these two cairns, its introduction into the wider landscape would not detract from the appreciation and understanding of the siting of the cairns or their associative interrelationships. The Proposed Development would not detract from the cultural significance of the monuments and their visual prominence in the landscape would be retained.

10.7.29 Taking the above factors into account, it is assessed that the presence of the Proposed Development in the surrounding landscape would have a negligible impact on the settings of the burial cairns. For assets of high sensitivity, the resultant effects are assessed as being of **minor** significance (not significant in EIA terms).

10.7.30 Two other hilltop cairns lie at even greater distance from the Proposed Development and share intervisibility and have views to Tinto Hill.

- Cairn Kinny (SM4275) is 9.9 km to the south southwest of the Proposed Development and is represented by the photomontage in LVIA VP 11. The wireline accompanying the photomontage indicates that 12 turbines would be visible at hub height and a further one at tip height.
- Cairn Table, two cairns (SM4631) is 9.8 km to the southwest of the Proposed Development and is represented by the photomontage in LVIA VP 15. The wireline accompanying the photomontage indicates that nine turbines would be visible at hub height and a further four at tip height.

10.7.31 In both cases the shared intervisibility and view to Tinto Hill would be unaffected by the Proposed Development. Although the Proposed Development would be visible from these two cairns, its introduction into the wider landscape would not detract from the appreciation and understanding of the siting of the cairns or their associative interrelationships. The Proposed Development would not detract from the cultural significance of the monuments and their visual prominence in the landscape would be retained.

10.7.32 Taking the above factors into account, it is assessed that the presence of the Proposed Development in the surrounding landscape would have a negligible impact on the settings of the burial cairns. For assets of high sensitivity, the resultant effects are assessed as being of **minor** significance (not significant in EIA terms).

Tinto Cairn, cairn on summit of Tinto Hill (SM4660)

10.7.33 The cairn on the summit of Tinto Hill (SM4660) is 13.9 km to the east northeast of the Proposed Development and is represented by the photomontage in LVIA VP 8. It has wide ranging views in all directions and is a prominent local landmark, visible from miles around when travelling through the landscape. The photomontage shows that all 13 turbines would be visible in the view to the west.

10.7.34 Although the Proposed Development would be visible from the cairn on Tinto Hill, its introduction into the wider landscape would not detract from the appreciation and understanding of the siting of the cairn or its wide ranging prominence in the landscape. The Proposed Development would not detract in any way from the cultural significance of the monument.

10.7.35 Taking the above factors into account, it is assessed that the presence of the Proposed Development in the surrounding landscape would have a negligible impact on the setting of Tinto Hill Cairn. For an asset of high sensitivity, the resultant effect is assessed as being of **minor** significance (not significant in EIA terms)

New Lanark World Heritage Site

10.7.36 New Lanark WHS lies 11 km to the northeast of the Proposed Development. The blade tip height ZTV indicates that, in the absence of any screening provided by intervening woodland, the Proposed Development would be theoretically visible from very limited elevated parts around the periphery of the WHS boundary; at its northeast and southwest edges, but importantly not from New Lanark village itself. From the core area there would be no visibility of the Proposed Development and from

none of Category A Listed Buildings at the heart of the WHS would there be any visibility of the Proposed Development.

- 10.7.37 There would, in the absence of any screening provided by intervening woodland, be some limited visibility from parts of the wider Falls of Clyde GDL. However, in practice, the woodland character of the GDL and the landscape within which the WHS lies would screen out any visibility of the Proposed Development. Even in the event that the Proposed Development was visible from the outer parts of the WHS boundary, at over 11 km distant, the presence of the turbines in the wider landscape would not detract from the cultural significance of the WHS or GDL and their unique character would be unaffected by the Proposed Development.
- 10.7.38 Taking the above factors into account, it is assessed that the presence of the Proposed Development in the wider surrounding landscape of the New Lanark WHS would have a no more than negligible impact on its setting. For an asset of very high sensitivity, the resultant effect is assessed as being of **minor** significance (not significant in EIA terms).

Decommissioning

- 10.7.39 Any ground breaking activities, or other activities, such as vehicle movements, soil and overburden storage and landscaping, associated with the decommissioning of the Proposed Development have the potential to cause direct, permanent and irreversible impacts on the cultural heritage. The likelihood of direct impacts is similar to that expected during the construction phase but likely to be less significant presuming that the built infrastructure is used to facilitate decommissioning and removal of the components.
- 10.7.40 There are no known, previously recorded and identified assets likely to receive a direct effect arising from decommissioning of the Proposed Development. Therefore, the effects from decommissioning the Proposed Development would be of **negligible** significance (**not significant** in EIA terms).

10.8 Mitigation

- 10.8.1 Whilst likely to be limited in this case, the scope of any required archaeological works: post-felling surveys; watching brief(s), etc would be developed in consultation with (and subject to the agreement of) WoSAS acting on behalf of South Lanarkshire Council and set out in one or more Written Scheme(s) of Investigation (WSI) provided for the approval of the Council post consent and in advance of development works commencing. This can be secured by an appropriately worded condition.
- 10.8.2 All required mitigation works would be conducted by a professional archaeological organisation, in accordance with the WSI.

Construction Phase Mitigation

- 10.8.3 Taking account of the avoidance through the design, the identified cultural heritage baseline and the current land-use as commercial forestry, there are no particularly sensitive areas where watching briefs would be expected to encounter any archaeological remains.

Post Excavation Requirements

- 10.8.4 If significant discoveries are made during any archaeological monitoring works which are required to be carried out under the terms of a planning condition, and it is not possible to preserve the discovered site or features in situ, provision would be made for the excavation where necessary, of any archaeological remains encountered. The provision would include the consequent production of written reports, on the findings, with post-excavation analysis and publication of the results of the works, where appropriate.

Construction Guidelines

- 10.8.5 Written guidelines would be issued for use by all construction contractors, outlining the need to avoid causing unnecessary damage to known heritage assets. The guidelines would set out

arrangements for calling upon retained professional support in the event that buried archaeological remains of potential archaeological interest (such as building remains, human remains, artefacts, etc.) should be discovered in areas not subject to archaeological monitoring.

- 10.8.6 The guidelines would make clear the legal responsibilities placed upon those who disturb artefacts or human remains.

Operational Phase Mitigation

- 10.8.7 No mitigation is proposed in respect of the predicted effects on the settings of heritage assets occurring for the duration of the operation of the Proposed Development.

Decommissioning Phase Mitigation

- 10.8.8 No mitigation is proposed in respect of the potential effects on heritage assets occurring during decommissioning of the Proposed Development.

10.9 Residual Effects

Construction Effects

- 10.9.1 For heritage assets within the Proposed Development site, completion of the programme of archaeological mitigation works set out above (paragraphs 10.8.1 to 10.8.8) would avoid, reduce or offset the loss of any archaeological remains that may occur as a result of the construction of the Proposed Development. Taking the proposed mitigation into account, any residual effect arising from construction of the Proposed Development in relation to direct effects on cultural heritage assets within the Proposed Development site would be of no more than **negligible** significance (**not significant** in EIA terms).

Operational Effects

- 10.9.2 During its operational lifetime, the residual effects of the Proposed Development on the settings of heritage assets in the wider study area would be the same as the predicted effects. One residual effect of moderate significance (significant in EIA terms) is predicted, on the setting of St Bride's Chapel, Church and Burial Ground, although significant in EIA terms, the predicted effect would not compromise the cultural significance or special interest of St Bride's Chapel, Church and Burial Ground and would be fully reversible upon decommissioning.
- 10.9.3 All other impacts, affecting the settings of heritage assets in the surrounding landscape, would give rise to effects that are either of minor or negligible significance (not significant in EIA terms) and would in any case be fully reversible upon decommissioning.

Decommissioning Effects

- 10.9.4 There would be no residual direct effects arising as a consequence of decommissioning the Proposed Development.
- 10.9.5 Decommissioning the Proposed Development would remove the operational effects of heritage assets (impacts on their setting), resulting in no residual effects.

10.10 Cumulative Assessment

- 10.10.1 Figure 10.4 shows the Proposed Development, along with the locations of other operational and consented or under construction wind farms, and those that are currently proposed (in planning), together with the nationally important cultural heritage assets within 15 km of the Proposed Development.
- 10.10.2 The wireline visualisations (Figures 10.5-10.8) include the cumulative schemes and have been used to inform the assessment of the cumulative effects on cultural heritage assets in the wider

landscape. The LVIA VPs referenced also show the cumulative schemes where these are visible from the viewpoint.

- 10.10.3 Based on the distribution shown on Figure 10.4 and professional judgement, those other schemes in combination with the Proposed Development, most likely to have a potential cumulative impact on cultural heritage assets are those within the Hagshaw cluster, notably:
- Hagshaw Hill (operational - 26 turbines);
 - Hagshaw Hill Extension (operational - 20 turbines);
 - Galawhistle (operational - 22 turbines);
 - Cumberhead (consented - 11 turbines)
 - Cumberhead Revised (in planning - 14 turbines);
 - Nutberry (operational - 6 turbines);
 - Dalquhandy (consented - 15 turbines);
 - Dalquhandy Revised (in planning - 15 turbines);
 - Douglas West (consented - 13 turbines); and,
 - Hagshaw Hill Repowering (in planning - 14 turbines).
- 10.10.4 Others within the cluster include:
- Poniel (consented – 3 turbines); and,
 - Hazelside Farm (2 consented turbines, 1 operational)
- 10.10.5 Collectively (excluding the existing Hagshaw Hill turbines, which are to be replaced) these cumulative schemes constitute a cluster of 100 turbines in the hills to the northwest of Douglas; mostly on former opencast coal mining sites or within commercial forestry plantations. The Proposed Development would be an addition to that cluster, occupying an area of commercial forestry in the middle of the group.
- 10.10.6 Those cumulative developments that are operational are included in the baseline against which the impact on the settings of heritage assets has been assessed. The cumulative assessment therefore addresses the effect of adding the Proposed Development to a baseline that includes consented and in planning development in the context of that baseline of operational developments.
- 10.10.7 For most of the heritage assets within the Outer Study Area the addition of the Proposed Development to a baseline including the operational and consented schemes within the Hagshaw cluster will be of no more than negligible magnitude. The Proposed Development would sit within the cluster and would not add appreciably to the visual impact from the operational and consented developments.
- 10.10.8 For the assets within Douglas: St Bride’s chapel (LB1490) and church (SM92065) and Earl of Angus’ Monument (LB1457) the cumulative effect of the addition of the Proposed Development to a baseline including the operational and consented schemes within the Hagshaw cluster will be of negligible magnitude (a very minor change to the setting measured against the operational and consented baseline) and of **minor** significance (not significant in EIA terms). The Proposed Development would sit within the cluster and would add very little to the visual impact from the operational and consented developments.
- 10.10.9 Similarly, for Douglas Castle (LB1449) the cumulative effect of the addition of the Proposed Development to a baseline including the operational and consented schemes within the Hagshaw cluster will be of negligible magnitude (a very minor change to the setting measured against the operational and consented baseline) and of **minor** significance (not significant in EIA terms). The

Proposed Development would sit within the cluster and would add very little to the visual impact from the operational and consented developments.

10.11 Summary

- 10.11.1 A detailed desk-based assessment covering the Proposed Development site and an area extending to 1 km all around has identified that there are three heritage assets within the site boundary: an enclosure of unknown, but possibly prehistoric, date; an old sheepfold; and, a possible location for a small farmstead of 18th century date. The Proposed Development site is almost entirely occupied by commercial forestry which has been planted over the recorded locations of those assets that have been identified. Within 1 km of the Proposed Development site the historic landscape character is largely of a post-medieval farming landscape with historical exploitation of coal as a fuel source having commenced in at least the latter part of the 18th century. Remnants of the farming landscape survive as areas of rig and furrow and small farmsteads.
- 10.11.2 All of the identified heritage assets within the Proposed Development site have been avoided through design of the wind farm layout and, taking account of the current land-use, the potential for further archaeological discoveries within the Proposed Development site is assessed as being low or negligible.
- 10.11.3 There is one Scheduled Monument and two Category A Listed Buildings within 5 km of the Proposed Development, from the location of which there would be visibility of the Proposed Development. The assessment has concluded that the effect on the setting of one of these (St Bride's chapel (LB1490) and church (SM90255)) would be of minor magnitude and **moderate** significance (significant in EIA terms) but not to an extent that would diminish or compromise the cultural significance or the special interest of the site.
- 10.11.4 All other effects on the setting of heritage assets in the Outer Study Area, from which there is predicted theoretical visibility based on analysis of the blade tip height ZTV, are assessed as being of minor or negligible significance (not significant in EIA terms). In particular, the effect on the setting of the New Lanark World Heritage Site is assessed as being of no more than negligible magnitude and negligible significance (not significant in EIA terms).
- 10.11.5 The cumulative effect of the addition of the Proposed Development to a baseline including the operational and consented wind farm development in the Hagshaw cluster has also been considered. The assessment, informed by the cumulative photomontages and wirelines produced for the assessment, has concluded that the addition of the Proposed Development to a baseline including the operational and consented schemes within the Hagshaw cluster would give rise to a cumulative effect of negligible magnitude (a very minor change to the setting measured against the operational and consented baseline) and of **minor** significance (not significant in EIA terms).

Table 10.6 – Summary Table

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
<i>During Construction & Decommissioning</i>					
Potential direct effects on any buried remains surviving within the development footprint; e.g. Erkny Hill farmstead (DWE01).	Negligible	Adverse	Implementation of mitigation proposals.	Negligible	Adverse
<i>During Operation</i>					
Effect on the setting of St Bride’s Chapel (LB1490) and St Bride’s Church (SM90265) during operation.	Moderate	Adverse	No practical mitigation.	Moderate	Adverse
Effect on the setting of Douglas castle (LB1449) during operation.	Minor	Adverse	No mitigation necessary.	Minor	Adverse
Effects on settings of other designated heritage assets in the wider landscape during operation.	Minor / Negligible	Adverse	No mitigation necessary.	Minor / Negligible	Adverse
<i>Cumulative Effects</i>					
Cumulative effect on the setting of St Bride’s Chapel (LB1490) and St Bride’s Church (SM90265) arising from the Proposed Development in combination with other operational and consented developments in the Hagshaw cluster.	Minor	Adverse	No mitigation necessary.	Minor	Adverse
Cumulative effect on the setting of Douglas Castle (LB1449) arising from the Proposed Development in combination with other operational and consented developments in the Hagshaw cluster.	Minor	Adverse	No mitigation necessary.	Minor	Adverse
Cumulative effect on the setting of other designated heritage assets in the wider landscape arising from the Proposed Development in combination with other operational and consented developments in the Hagshaw cluster.	Minor / Negligible	Adverse	No mitigation necessary.	Minor / Negligible	Adverse

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