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Introduction

11.1 This Chapter presents the assessment of the likely significant effects on Cultural Heritage and Archaeology receptors arising from West Scales Energy Park ('the Proposed Development') during construction, operation and decommissioning.

11.2 The 'cultural heritage' of an area comprises archaeological sites, historic buildings, Inventoried Gardens and Designed Landscapes (GDLs), Inventoried Battlefields and other historic environment features. Alongside its inherent values, the 'setting' of an asset may also contribute to its cultural heritage significance.

11.3 The cultural heritage impact assessment:

- identifies cultural heritage assets that may be subject to significant effects, both within the footprint of the infrastructure of the Proposed Development and within a surrounding radius of 10km;
- establishes the potential for currently unknown archaeological assets to survive buried within the Site; assesses the predicted effects on these assets; and
- proposes a programme of mitigation where appropriate.

11.4 It considers direct effects (such as physical disturbance or effects through setting change), indirect effects (such as might result from dewatering), and cumulative effects (where assets affected by the Proposed Development are also likely to be affected by other development proposals of a similar nature). The proposed approach to the assessment of effects on cultural heritage is set out below.

11.5 The objectives of the chapter are to:

- describe the current baseline established from desk studies, targeted surveys and feedback obtained during consultation with statutory consultees;
- describe the assessment methodology and significance criteria used in completing the impact assessment;
- describe the potential effects, including direct (physical), direct (setting), indirect, and cumulative effects;
- assess the residual effects remaining following the implementation of mitigation measures; and
- reach a conclusion on the likely significant effects based on the information gathered and the analysis and assessments undertaken.

11.6 The chapter then highlights any further measures recommended to prevent, minimise, reduce, or offset any environmental effects, including those identified as significant.

11.7 The assessment has been carried out by Elise Christensen MA (Hons) FSA Scot ACIfA, Senior Heritage Consultant. The chapter has been reviewed and approved by Beth Gray, MA (Hons) MCIfA, FSA Scot, Principal Heritage Consultant.

11.8 The chapter is supported by:

- **Technical Appendix 11.1: Gazetteer of Heritage Assets within 1km of Proposed Development**.

- **Technical Appendix 11.2: Cultural Heritage Appraisal.**

11.9 Legislation, guidance and policy relevant to this assessment is detailed in **Technical Appendix 4.1: Legislation, Guidance and Policy**.

Scope and Consultation

Scope of the Assessment

11.10 This chapter takes an appropriate and topic specific approach to assessment of the Proposed Development within the parameters identified in **Chapter 3: Description of Development.** This chapter provides a worst-case assessment for Cultural Heritage and Archaeology and presents enough information for consultees and the decision makers to comment on and determine the application within the parameters of the Proposed Development.

Consultation

11.11 In undertaking the assessment, consideration has been given to the consultation responses outlined within **Table 11-1**.

Table 11-1: Scoping Responses

Consultee	Summary of Key Issues	SLR Response/Action
Pre-Scoping Consultation		
Historic Environment Scotland (HES) 23/01/2025	HES noted that the proposed development had the potential for significant adverse impacts on a number of assets within their remit, with the potential for objection based on these impacts. At the pre-scoping stage, HES were largely content with the list of assets to be scoped in. They expect that the list would be evolving and would develop along with the design. HES note that a 10km study area was used, however, they state that a ZTV should be used to identify assets at risk of impact instead of using a specific study area. Any sieving exercise should give consideration for assets with long distance views which form part of their cultural significance. HES are content for the Battle of Sark (BTL40) to be scoped out of further assessment. HES have noted a number of assets that they consider to have the potential to experience setting impacts as a result of the proposed development. They state that they expect potential impacts to be monitored and assessed as the design progresses and if any significant adverse impacts are identified then mitigation by design should be explored to reduce impacts.	HES's concerns are noted and impacts on assets within their remit have been considered throughout the design process. The list of assets to be scoped in for full assessment due to the potential for impacts on their setting was reviewed throughout the design process, with the final list found in **Table 11-7** of this chapter. A ZTV (**Figure 11.1**) has been used to identify assets at risk of impact. An appraisal table, containing the results of the sieving exercise is found in **Technical Appendix 11.2**. SM11947, SM11950, and LB9799 have been assessed for potential impacts on their setting in Section 11.5.2.

Consultee	Summary of Key Issues	SLR Response/Action
	The assets identified are: • Calvertsholm Cottages, cairn 315m WNW of (SM11947); • Calvertsholm Cottages, cairn 320m NNW of (SM11950); and • Mossknowe House (LB9799). HES note that at a minimum wireline visualisations should be used for assets scoped in for detailed assessment. If these wirelines are provided to HES at an early stage, they can help identify locations for photomontages. They note the important visual relationship between two cairns, SM11947 and SM11950. They suggest that an additional photomontage is added, c. 25m northeast of SM11950 in order to demonstrate the alignment of the two cairns. HES are content with the proposed photomontage location for Mossknowe House (LB9799). HES request that a wireline is produced from the location of Stapleton Tower (LB3782), as well as from the field behind the tower looking to the development in order to demonstrate the potential impacts on views towards it.	Visualisations for the identified assets have been provided as **Figures 11.4 – 11.12**. A visualisation showing the relationship between SM11947 and SM11950 is found in **Figure 11.9**.
Scoping Stage		
Historic England 12/05/2025	Historic England (HE) responded based only on their remit, which extends only to the administrative boundaries of England.	SLR acknowledge that the study area includes heritage assets within the remit of HE and HES. Both parties have been consulted.
	HE requested that the World Heritage Site – Frontiers of the Roman Empire (Hadrian's Wall) (List Entry No: **1000098**) and its associated scheduled monuments, and all other potentially impacted heritage assets be appropriately assessed.	Frontiers of the Roman Empire (Hadrian's Wall) (List Entry No: **1000098**) has been included in the assessment of operational effects (Section 11.5) The appraisal table in **Technical Appendix 11.2** has been continually updated with each design to ensure any heritage assets with long distance views which contribute to their cultural significance are assessed.

Consultee	Summary of Key Issues	SLR Response/Action
	Section 10.4.2 ('Hadrian's Wall WHS' subheading) – any assessment of impacts to the World Heritage Site should be described in terms of potential to impact its Outstanding Universal Value, through development within its wider setting.	The assessment was undertaken with references to the visualisations seen in **Figure 7.23** and is presented in Section 11.5.2 of this chapter.
	All Grade I Listed Buildings, and Scheduled Monuments in England with the potential for sightlines to the proposed development site should be scoped in for assessment. These should be included in the photomontage in Section 10.5 - Table 10-3.	The potential for significant impacts, and in particular at such a distance, is not dictated solely by visibility, and SLR's appraisal process has considered key aspects of setting, which includes visibility as one contributory factor to recognised significance. Further justification for specific assets can be found in **Technical Appendix 11.2**.
HES 13/05/2025	HES reiterate their concern over potential impacts on: • Calvertsholm Cottages, cairn 315m WNW of Scheduled Monument (SM11947); • Calvertsholm Cottages, cairn 320m NNW of Scheduled Monument (SM11950); • Mossknowe House (LB9799); and • Stapleton Tower (LB3782).	These heritage assets have been included for assessment in Section 11.5 of this chapter.
	HES comment on some inconsistencies in the method of assessment proposed by SLR, including typos and some updated terminology.	The requested updates to assessment methodology have been made and are presented in Section 11.4 of this chapter.

Consultee	Summary of Key Issues	SLR Response/Action
	HES recommend that the assessment should only refer to Scottish legislation, policy and guidance, given that the Proposed Development is located within Scotland.	Policy and legislation has been used according to Scotland's planning system, however, guidance relating to the assessment of setting for HE has been referenced for those heritage assets which fall under HE's jurisdiction.
	In regard to Mossknowe House (**LB9799**) and Stapleton House (**LB3782**), HES state concerns over potential significant impacts on the integrity of setting. Additionally, they add that: "*where the surroundings of category A listed buildings include mature woodland that may provide some screening of the proposed development, where such screening is included in an assessment, plans for it should be reviewed to establish if it is likely to be present in the long term."*	As per the wording in National Planning Framework 4 (NPF4), adverse impacts on the integrity of setting does not apply to Listed Buildings. Instead, the assessment considers the wording under NPF4 Policy 7c) which states development proposals affecting the setting of a listed building should "*preserve its character, and its special architectural or historic interest".* The preservation of setting is discussed in Section 59 of the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 where relevant to the asset.
	HES further comment on the locations of visualisations from Mossknowe House (**LB9799**) and Stapleton Tower (**LB3782**) after seeing the wirelines sent with the Scoping Report. They note some errors in the coordinates of each visualisation.	Visualisation location changes have been addressed in the finalised locations. See CH1, CH2, CH3, CH4, CH5 (**Figures 11.4 – 11.8**)
Dumfries & Galloway Council 27/05/2025	Dumfries & Galloway Council's (D&GC) archaeologist recommends the assessment methodology should take a whole landscape approach, covering all known archaeological sites, features, findspots and potential for discovering unknown archaeology. The Council also notes the significance of peat deposits in the surrounding landscape, highlighting that peat holds a high potential for	The presented methodology ensures a well-rounded appraisal of all known archaeological assets; LiDAR. historic mapping, historic land use, and assessment for the potential of further archaeological remains (Section 11.4 and 11.5).

Consultee	Summary of Key Issues	SLR Response/Action
	preserved archaeological remains and this should be considered within the Chapter. They state visualisations should consider setting impacts in relation to various HER assets within vicinity of the site and cumulative effects should also be considered. Photomontages looking at the potential impacts on the interrelationship between assets should be provided, along with detailed maps.	The potential for preserved archaeological remains within the peat deposits has been considered throughout the chapter. The proposed mitigation for the potential preserved remains is discussed in Section 11.6. Visualisations have been produced for assets considered to be most likely to have significant impacts on their cultural significance as a result of the Proposed Development. The assets scoped in for assessment can be found in Section 11.5.
Post-Scoping		
HES 30/07/2025	After SLR's reply to the Scoping response from HES, HES addressed the updated methodology and the query on the proposed visualisations from the Category A Listed Mossknowe House (**LB9799**). HES advised they are content with the photomontage locations identified, but requested additional photomontages for Mossknowe House (**LB9799**), detailed below: - *a photomontage from the east entrance drive (328316E, 569837N) to cover the potential for turbines to be visible in views of the house from this approach.* - *a photomontage from the room directly above the library on the south elevation of the house.*	SLR responded to this (on 01/09/2025), requesting further justification for the additional two photomontage locations, in addition to the two photomontage locations already identified for Mossknowe House (**LB9799**). SLR maintain that the two photomontages agreed would adequately demonstrate visibility on aspects the contribute to the cultural significance of the house and provided justification.
HE 03/09/2025	After SLR's reply to the Scoping response from HE, HE respond stating that they consider the development will not be significantly intrusive in the context of the existing landscape, taking into consideration existing and proposed wind farms. They note the current proposal would be considered to have a minor impact of the significance of the World Heritage Site, which will not harm the ability to understand and appreciate the Roman frontier. They suggest proposed mitigation in the form of addressing the height, density, and location	The assessment of Hadrian's Wall is provided in Section 11.5 Assessment of Effects. Mitigation is presented in Section 11.7 Mitigation.

Consultee	Summary of Key Issues	SLR Response/Action
	of the development should be considered to lessen the visual impact. HE agreed that scoping out Grade I Listed assets in England is acceptable should the reasoning be clearly demonstrated in the EIA chapter. HE has suggested the use of additional guidance regarding assessment on Hadrian's Wall be referenced.	A Cultural Heritage Appraisal, which includes the justification for scoping out any Grade I Listed buildings within the study area, can be found in the **Technical Appendix 11.2**. Policy and Guidance, including *UNESCO guidance on Heritage Impact Assessment and Historic England guidance on World Heritage Sites* and *The Management Plan for the Hadrian's Wall World Heritage Site* and have been referred to throughout the EIA and are detailed in **Technical Appendix 4.1 Legislation, Guidance and Policy**.
HES 22/09/2025	HES responded to SLR's email dated 01/09/2025. They reiterate their concerns on the potential significant impacts on the integrity of setting on both Calvertsholm Cottages, cairn 315m WNW of (**SM11947**) and Calvertsholm Cottages, cairn 320m NNW of (**SM11950).** HES disagree with SLR's response regarding the two additional photomontage locations requested by HES. They state that whilst a photomontage from the first floor of Mossknowe House is not essential, a wireline would be beneficial in the first instance to rule out significant adverse impacts. They also confirm that they require a photomontage produced from the east entrance drive.	Both **SM11947** and **SM11950** are assessed in full in S**ection 11.5** of this Chapter. These additional visualisations have been produced as CH2 and CH5. These are in addition to the original agreed locations of CH1, and CH4, with CH3 produced as a supplementary view. These are seen as **Figures 11.4** - **11.8** and referenced in the Mossknowe House (**LB9799**) assessment in Section 11.5 Assessment of Effects**.**

Effects Assessed in Full

Assets within the Site

11.12 Cultural heritage assets within the Site boundary were assessed in order to determine any direct and indirect impacts.

Assets outwith the Site

11.13 All nationally and regionally significant designated assets within 10km of the proposed wind turbines, which are the most visible aspects of the Proposed Development, were considered during the scoping phase for potential impacts on their setting and were subjected to a Cultural Heritage Appraisal (**Technical Appendix 11.2**). The scope of assessment of cultural heritage assets is set out in **Table 11-7,** in line with the advice received from HES, HE and D&GC.

Effects Scoped Out

11.14 With the exception of designated heritage assets scoped in for detailed assessment for the potential for significant effects on their setting (**Table 11-7**), designated heritage assets within 10km of the proposed wind turbines that do not fall within the ZTV, and designated heritage assets that are outwith the 10km study area have been scoped out of further assessment as the potential for significant adverse impacts are considered unlikely (**Technical Appendix 11.2**). This has been agreed upon through consultation undertaken with HES, HE and D&GC (**Table 11-1**).

Approach and Methods

11.15 The assessment methodology adhered to for purposes of preparing this chapter is detailed below.

Study Area

11.16 The following study areas have been used in this assessment:[1]:

- To assess the impact on the settings of heritage assets, a 10km study area was defined around the proposed wind turbines, as these are the most visually prominent elements of the Proposed Development due to their scale. (**Figure 11.1**); and
- A 1km radius to ascertain the potential for unknown buried remains was applied to the Site boundary (**Figure 11.2**).

Desk Based Research and Data Sources

Information and Data Sources

[1] There is no guidance defining what the extent of an appropriate ‘study area’ should be for the archaeological and cultural heritage assessment of wind farms. Any given study area will therefore represent an exercise in professional judgement, refined to point of agreement between stakeholders during consultation.

11.17 **Table 11-2** sets out the main data sources used in this study.

Table 01-1: Main Data Sources Used in the Production of this Chapter

Subject	Source	Location
Designated heritage assets (except conservation areas)	HES	HES digital data download
Conservation areas	Dumfries and Galloway Council	HES digital data download
Non-Designated heritage assets	HES Database – Trove	Digital data supplied as download
Non-Designated heritage assets	Historic Environment Record (HER) data held by Dumfries and Galloway Council	Digital data supplied as download
Historic maps	National Library of Scotland	Online
Aerial photography	HES	HES database Canmore and National Collection of Aerial Photograph (NCAP) (online)
Historic Land-Use Assessment (HLA)	HES	Online
Historic environment	Unpublished reports	Various
	Published synthetic works	Various
Condition of recorded heritage assets within the site	Field inspection	Inspected by SLR Consulting in October 2025.
Setting of heritage assets	Field inspection within study areas and other specified assets from areas of public access.	Inspected by SLR Consulting in October 2025

Field Surveys

11.18 An archaeological walkover of the Site was undertaken on 28 October 2025. The aim of the Site visit was to conduct a targeted walkover to the proposed wind turbine locations (as they were at the time of Site visit), alongside a blanket walkover covering the areas proposed for solar arrays and all other infrastructure. The Site layout has undergone a number of minor revisions since the targeted walkover survey, however, all proposed wind turbine locations were observed and visited.

11.19 The Site visit confirmed the lack of known heritage assets within the Site with no evidence for additional features. It was observed that the ground was waterlogged in the southern part of the Site. The presence of peat within the south of the Site (**Chapter 10: Hydrology, Hydrogeology and Geology**) indicates there would be a higher archaeological potential for remains here, where the soil conditions provide more suitable conditions for preservation.

11.20 Site visits to assess the setting of the ‘scoped in’ heritage assets were undertaken in July and October 2025.

Assessment Methods

Assessment Methodology

11.21 The Proposed Development has the potential to result in effects upon the cultural significance of heritage assets where it changes their baseline condition and/or their setting.

11.22 In accordance with the Scottish Statutory Instrument No. 101 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 and the Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment Process in Scotland (Scottish Natural Heritage and HES, 2018), this assessment has identified any development impacts as either direct or indirect, adverse, or beneficial, and short-term, long-term, or permanent. The definition of impact is described below:

- Direct (physical) impacts: occur where the physical fabric of the asset is removed or damaged, or where it is preserved or conserved, as a direct result of the Proposed Development. Such impacts are most likely to occur during the construction phase and are most likely to be permanent.
- Indirect (physical) impacts: occur where the fabric of an asset, or buried archaeological remains, is removed or damaged, or where it is preserved or conserved, as an indirect result of the Proposed Development even though the asset may lie some distance from the Proposed Development. These could include changes in the natural flow of water, such that the soil conditions of buried archaeology change thus affecting the preservation, or water damage to fragile building materials. Such impacts are most likely to occur during the construction phase and are most likely to be permanent. Direct (setting) impacts: result from the Proposed Development causing change within the setting of a heritage asset that affects its cultural significance or the way in which it is understood, appreciated, and experienced. Such impacts are generally, but not exclusively, visual, occurring directly as a result of the appearance of the proposal in the surroundings of the asset. Setting impacts may also relate to other senses or factors, such as noise, odour or emissions, or historical relationships that do not relate entirely to intervisibility, such as historic patterns of land-use and related historic features. Such impacts may occur at any stage of a proposal's lifespan and may be permanent, reversible, or temporary.
- Cumulative impacts: can relate to the physical fabric or setting of assets. They may arise as a result of impact interactions, either of different impacts of the Proposed Development itself, or additive impacts resulting from incremental changes caused by the Proposed Development together with other projects already in the planning system or allocated in a Local Development Plan.

11.23 Direct impacts upon the cultural significance of heritage assets have taken into account the level of their cultural significance (where known) and the magnitude (extent) of the identified impacts. Where direct impacts on setting are concerned, sensitivity of setting to change is also considered.

11.24 Impacts on cultural heritage assets will be identified and assessed with reference to the guidance set out by Scottish Natural Heritage and HES (2018). Assessment was carried out in the following stages:

- Preliminary assessment of cultural heritage assets (designated and non-designated) to evaluate the potential for significant impacts on their cultural significance arising from the proposed development (including the heritage appraisal undertaken at the scoping stage);
- Detailed assessment of the cultural significance of the potentially sensitive assets, identifying aspects of the asset and its environment which contribute to its cultural significance;
- Identify the type and degree of impact on the cultural heritage asset, resulting from the Proposed Development (magnitude of change);
- Determine the effects of any identified impacts on the asset's cultural significance (significance of effect); and
- Determine whether the identified significance of effect would be considered significant in EIA terms, as per the Scottish Natural Heritage and HES (2018) guidance.

11.25 Assessment on the impacts on the setting of cultural heritage assets will be carried out following the three-stage approach outlined in Managing Change in the Historic Environment: Setting (HES 2020):

- 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.

World Heritage Sites

11.26 The *Guidance and Toolkit for Impact Assessments in a World Heritage Context* (UNESCO, ICCROM, ICOMOS and IUCN, 2022) provides an outline methodology for assessing impacts on World Heritage Sites. It helps to identify and define the values and attributes of the site concerned, whether it is a cultural, natural or mixed cultural-natural site. It explains the process for evaluating potential impacts, and finding appropriate mitigation measures and alternative options.

11.27 The guidance outlines that the impact assessment baseline should discuss the World Heritage property's Outstanding Universal Value, other heritage values, attributes, buffer zone and wider setting. Whilst the guidance provides the general approach to assessment, it does not provide any additional methodology to determining change to the setting of heritage assets that would supersede the three step approach outlined by HES in *Managing Change in the Historic Environment: Setting* (2020).

Zone of Theoretical Visibility (ZTV)

11.28 The settings assessment has been assisted by a ZTV calculation, presented on **Figure 11.1**. A ZTV calculation maps the predicted degree of visibility of a development from all points within a proportionate, defined study area around a site, as would be seen from an

observer's eye level (at two metres above ground level)[2]. The ZTV model presented on **Figure 11.1** is based upon the maximum level of theoretical visibility, i.e. the maximum height of the turbine blade tips. As bare earth topographical data was used, the ZTV assumes the worst-case scenario, with no screening such as vegetation or buildings. For further information on the ZTV methodology, refer to **Chapter 7: Landscape and Visual**.

Cultural Heritage Significance

11.29 The categories of cultural heritage significance to be referred to are presented in **Table 11-3**, which will act as an aid to consistency in the exercise of professional judgement and provide a degree of transparency for others in evaluating the conclusions drawn.

11.30 The cultural heritage significance categories take into account factors such as: designation, status, and grading. For non-designated assets, consideration has been given to their inherent heritage interests, intrinsic, contextual, and associative characteristics as defined in HES's Designation Policy and Selection Guidance (HES, 2019c). In relation to these assets, the assessment focuses upon an assessment of the assets' inherent capability to contribute to our understanding of the past; the character of their structural, decorative and field characteristics as informed by the Historic Environment Record (HER) and Trove records and/or site visit observations; the contribution of an asset to their class of monument, or the diminution of that class should an asset be lost; and how a site relates to people, practices, events, and/or historical or social movements. Assessments of the cultural significance of specific assets, where recorded within the HER, have been taken into account where appropriate.

Table 10-2: Cultural Heritage Significance

Cultural Heritage Significance	Criteria
Highest	Sites of international importance, including: • World Heritage Sites (Scotland, England)
High	Sites of National importance, including: • Scheduled Monuments (Scotland, England); • Category A Listed Buildings (Scotland); • Grade I and II* Listed Buildings (England); • Gardens and Designed Landscapes included on the national inventory (Scotland); • Grade I and II* Registered Parks and Gardens (England); • Designated Battlefields (Scotland, England) • Conservation areas containing nationally important buildings (Scotland, England); and • Non-designated assets of equivalent significance.
Medium	Sites of Regional/Local importance, including: • Category B and C Listed Buildings (Scotland);

[2] Viewing height of 2m above ground level which falls within recommendations by "Visual Representation of Windfarms" prepared for Scottish Natural Heritage (SNH) February 2017 -Version 2.2.

Cultural Heritage Significance	Criteria
	• Conservation Areas containing buildings that contribute significantly to its character (Scotland, England); and • Non-designated assets of equivalent significance.
Low	Assets of Local importance. Heritage assets compromised by poor preservation and/or poor survival of contextual associations or with little of the asset remaining to justify a higher importance.
Negligible	Assets that are of very little or no heritage interest. Heritage assets where the ability to interpret their archaeological context has been removed/eroded.
Unknown	Further information is required to assess the significance of these assets.

11.31 The cultural significance of the heritage asset can comprise many factors, including the setting within which it is placed (HES, 2019c). The contribution of the asset's setting to its cultural significance and sensitivity thereof varies based on the type of asset, its preservation, and its current setting. As part of the assessment, the contribution of the asset's setting and relative sensitivity to change will be presented with relevant justification, utilising the results of desk-based research, a field visit, and professional judgement.

11.32 Due to the unique qualities of each heritage asset, this will be determined on a case-by-case basis for each receptor in line with HES's Managing Change in the Historic Environment: Setting[3] guidance and the EIA Handbook (Scottish Natural Heritage, 2018) as per the above methodology (**Assessment Methodology**).

Magnitude of Change

11.33 Determining the magnitude of any likely change (direct or indirect) includes consideration of the nature of the activities proposed during the construction, operational and decommissioning phases of the Proposed Development.

11.34 Changes could potentially include ground disturbance and changes to setting. The latter might include visual change, as well as noise, vibration, smell, dust, traffic movements etc. Impacts may be beneficial or adverse, and may be short term, long term or permanent.

11.35 Where adverse impacts on cultural heritage assets are possible, the magnitude of change can be reduced through measures to prevent, reduce and/or, where possible, offset these impacts.

11.36 The magnitude of any change has been assessed using professional judgement, with reference to the criteria set out in **Table 11-4**.

Table 11-4: Magnitude of Change

Magnitude of Change	Explanatory Criteria
High Beneficial	Changes to the elements of the fabric or the setting of the cultural heritage asset that contribute to its cultural significance, such that this cultural significance, or the ability to understand, appreciate and experience the asset, is considerably enhanced.
Medium Beneficial	Changes to the elements of the fabric or the setting of the cultural heritage asset that contribute to its cultural significance, such that this cultural significance, or the ability to understand, appreciate and experience the asset, is enhanced to a clearly discernible extent.
Low Beneficial	Changes to the elements of the fabric or the setting of the cultural heritage asset that contribute to its cultural significance, such that this cultural significance, or the ability to understand, appreciate and experience the asset, is enhanced to a minor extent.
Very Low Beneficial	Changes to the elements of the fabric or the setting of the cultural heritage asset that contribute to its cultural significance, such that this cultural significance, or the ability to understand, appreciate and experience the asset, is enhanced to a very minor extent.
Neutral/None	The Proposed Development would not impact the cultural heritage significance of the heritage asset, or the ability to understand, appreciate and experience it.
Very Low Adverse	Changes to the elements of the fabric or the setting of the cultural heritage asset that contribute to its cultural significance, such that this cultural significance, or the ability to understand, appreciate and experience the asset, is eroded to a very minor extent. This level of impact would not be considered to affect the integrity of the asset's setting.
Low Adverse	Changes to the elements of the fabric or the setting of the cultural heritage asset that contribute to its cultural significance, such that this cultural significance, or the ability to understand, appreciate and experience the asset, is eroded to a minor extent. This level of impact would rarely be considered to affect the integrity of the asset's setting.
Medium Adverse	Changes to the elements of the fabric or the setting of the cultural heritage asset that contribute to its cultural significance, such that this cultural significance, or the ability to understand, appreciate and experience the asset, is eroded to a clearly discernible extent. This level of impact might be considered to affect the integrity of the asset's setting.
High Adverse	Changes to the elements of the fabric or the setting of the cultural heritage asset that contribute to its cultural significance, such that this cultural significance, or the ability to understand, appreciate and experience the asset, would be considerably eroded. This level of impact would probably be considered to affect the integrity of the asset's setting.

Significance of Effect

11.37 **Table 11-5** provides a matrix that relates the cultural heritage significance of the asset to the magnitude of change on its cultural significance, to produce an overall anticipated level of effect (significance of effect).

Table 11-5: Significance of Effect

Magnitude of Change	Cultural Significance (Excluding Unknown)				
	Highest	High	Medium	Low	Negligible
High Beneficial	Major	Major	Moderate	Minor	Very Minor
Medium Beneficial	Major	Moderate	Minor	Very Minor	Negligible
Low Beneficial	Moderate	Minor	Very Minor	Very Minor	Negligible
Very Low Beneficial	Minor	Very Minor	Negligible	Negligible	Negligible
Neutral/None	Neutral/Nil	Neutral/Nil	Neutral/Nil	Neutral/Nil	Neutral/Nil
Very Low Adverse	Minor	Very Minor	Negligible	Negligible	Negligible
Low Adverse	Moderate	Minor	Very Minor	Very Minor	Negligible
Medium Adverse	Major	Moderate	Minor	Very Minor	Negligible
High Adverse	Major	Major	Moderate	Minor	Very Minor

Cumulative Effects

11.38 Cumulative effects have been assessed in line with the guidance provided in the EIA Handbook[4]. A cumulative effect is considered to occur when there is a combination of:

- An impact on an asset or group of assets due to changes resulting from the Proposed Development; and
- An impact on the same asset or group of assets resulting from other developments of the same type or scale (consented or pending decision, but not operational) within the surrounding landscape.

11.39 Assets with a minor or higher significance of effect resulting from the Proposed Development in isolation have been considered for cumulative assessment, as these assets are most susceptible to significant cumulative effects.

11.40 Any effect resulting from operational solar and wind farms will be considered as part of the baseline impact assessment.

11.41 In accordance with the methodology agreed upon at Scoping, consideration of other developments has been limited to:

- wind farm applications with a decision pending within 15km of an asset with a minor or higher impact as a result of the Proposed Development;

[4] Scottish Natural Heritage and HES (2018).

- wind farm applications that have been consented but not constructed within 15km of an asset with a minor or higher impact as a result of the Proposed Development;
- solar farm applications with a decision pending within 2km of an asset with a minor or higher impact as a result of the Proposed Development; and
- solar farm applications that have been consented but not yet constructed within 2km of an asset with a minor or higher impact as a result of the Proposed Development.

11.42 A study area of 15km for wind developments, and 2km for solar developments, from each assessed asset was chosen based on professional judgement, allowing the assessment to encompass both the Proposed Development and any other developments within the surrounding landscape deemed to have the potential for cumulative effects.

11.43 Cumulative effects will be considered in two stages:

- assessment of the combined effect of the developments, including the Proposed Development; and
- assessment of the extent to which the Proposed Development contributes to the combined effect.

11.44 The developments included for cumulative assessment are accurate as of February 2026.

Significance and Integrity

Significance

11.45 Once the anticipated effects of the Proposed Development upon cultural heritage assets are defined, professional judgement is used to determine whether those effects would be either ‘Significant’ or ‘Not Significant’ for the purposes of EIA. As part of this determination process, regard was given to any relevant guidance.

11.46 With reference to the matrix presented in **Table 11-5:**

- any effects identified as ‘major’ would most probably be considered ‘significant;’
- any effects identified as ‘moderate’ might also be considered ‘significant,’ although professional judgement may determine otherwise on the basis of the associated site-/asset-specific detail; and
- any effects identified as ‘minor’ or less are unlikely to be considered ‘significant,’ though again, professional judgement has been exercised.

11.47 A clear statement has been made in relation to all affected assets as to whether the identified effects upon them are considered to be ‘significant’ or ‘not significant’ for purposes of EIA.

Application of NPF4

Gardens and Designed Landscapes

11.48 Policy 7i) of NPF4 states that development proposals affecting nationally important Gardens and Designed Landscapes will be supported where they *“protect, preserve, or*

enhance their cultural significance, character and integrity and where the proposals will not significantly impact on important views to, from and within the stie or its setting."

Listed Buildings

11.49 Policy 7c) of NPF4 states that development proposals affecting the setting of listed buildings should *"preserve its character, and its special architectural or historic interest."*

Scheduled Monuments

11.50 Policy 7h) of NPF4 states that development proposals affecting scheduled monuments will only be supported where; *"significant adverse impacts on the integrity of the setting of a scheduled monument are avoided."*

11.51 A significant effect in EIA terms does not necessarily equate to a significant impact upon the integrity of setting. Where EIA significant effects are found for Scheduled Monuments or Gardens and Designed Landscapes, a detailed assessment of adverse impacts upon the integrity of the setting is made. Whilst non-significant effects are unlikely to significantly impact the integrity of the setting, the reverse is not always true. That is, the assessment of an effect as being significant in EIA terms does not necessarily mean that the adverse effect on the setting of the asset will significantly impact its integrity. Changes to factors of setting that contribute to cultural significance, such that the understanding, appreciation and experience of an asset are not adequately retained will have a significant adverse impact on the integrity of its setting[5].

Mitigation

11.52 Suitable measures for minimising effects through ground disturbance might include:

- the micro-siting of Proposed Development infrastructure away from sensitive locations;
- the fencing off or marking out of heritage assets or features in proximity to construction activity in order to avoid disturbance where possible;
- a programme of archaeological work where required, such as an archaeological watching brief during construction activities in or in proximity to areas of archaeological sensitivity, or excavation and recording where impact is unavoidable; and/or
- a working protocol to be implemented should unrecorded archaeological features be discovered.

11.53 Suitable measures for mitigating any setting effects might include:

- alteration of the proposed wind turbine layout; and/or
- reduction of proposed wind turbine heights.

11.54 A statement of any embedded mitigation measures proposed to be implemented in response to identified cultural heritage impacts is provided, with the impact predictions

[5] As defined and agreed in the Hill of Fare Wind Farm Cultural Heritage Statement of Agreed Matters (July 2025). DPEA Reference: WIN-110-4

taking these into account. The main approach to mitigating both direct and indirect impacts has been through design. Avoidance of direct impacts on heritage assets has been a consideration throughout the design process. Where avoidance is not possible, further mitigation is proposed as a condition to consent.

11.55 In relation to direct physical impacts, embedded mitigation measures including adjustments to turbine numbers, layout and height, have been considered and incorporated as part of the design process (See **Chapter 2: Site Description and Design Evolution**).

11.56 Further proposed mitigation measures, not referenced above, such as archaeological fieldwork undertaken as a condition to consent or other post-consent measures associated with public benefits, is proposed in Section 11.5.

Residual Effects

11.57 Residual effects are the resulting effects after consideration of proposed mitigation measures. A statement of the residual effects of the Proposed Development has been provided, taking into account any site-specific mitigation measures which could be implemented as a condition to consent.

Assumptions, Limitations and Confidence

11.58 The assessment is based on the sources outlined in both **Table 11-2** and Section 11.9 and, therefore, shares the same range of limitations in terms of comprehensiveness and completeness of those sources.

11.59 During the Site survey and in-field setting assessments, access to the following heritage assets was restricted / limited:

- Bonshaw Tower and House (LB3489);
- Woodhouse Tower (SM12071); and
- Blackyett, cairn (SM11951).

11.60 In these instances, the setting was observed from the closest accessible distance and was supplemented with desk based research and visualisations.

Baseline Conditions

Current Baseline

Introduction

11.61 All heritage assets within the Site and 1km of this area are shown on **Figure 11.2**. Nationally designated assets within the study areas are shown in relation to the ZTV on **Figure 11.1**.

11.62 All recorded designated and non-designated heritage assets within 1km of the Site are listed in the gazetteer contained within **Technical Appendix 11.1.**

Designated Heritage Assets

11.63 There are no Scheduled Monuments, Gardens and Designed Landscapes, Inventoried Battlefields, Conservation Areas, or Listed Buildings within the Site boundary.

11.64 Within 10km of the proposed wind turbines, there are a total of 483 designated cultural heritage assets. This comprises one World Heritage Site, 429 Listed Buildings, 53 Scheduled Monuments, and one Conservation Area. Of the Listed Buildings, there are 21 Category A Listed Buildings and one Grade I Listed Building. There are no Gardens and Designed Landscapes within 10km of the Site. The nearest Archaeologically Sensitive Area, as designated by D&GC, is the historic medieval core of Annan approximately 7.5km to the west.

Topography and Geology

11.65 The Site is located on a lowland area with gentle slopes known as the Solway Plain. The AOD ranges between 20m and 31m, with the low point of 20m AOD in the south and the highest point lying in the most north western point of the Site. The nearest large watercourse is Kirtle Water, located approximately 1.8km to the north east of the Site. Drainage from Kirtle Water can be seen travelling through the southern portion of the Site.

11.66 Soil and geology of the Site is discussed in **Chapter 10: Hydrology, Hydrogeology and Geology**. The poor drainage of the soil composition contributes to effective archaeological preservation, particularly organic deposits. This is further discussed in Paragraph 11.95.

11.67 An appraisal of the Historic Land Use Assessment Data, created by Historic Environment Scotland, notes that the majority of the Site consists of Rectilinear Fields and Farms formed as part of the agricultural improvements in the 18th and 19th centuries. To the south portion of the Site, an area once defined as Rectilinear Fields is now in use as rough grazing. Smaller areas to the north, north west, and south west of the Site are recorded as Plantation, which are modern features of the landscape introduced in the early 20th century and today create clearly defined boundaries with breaks allowing for the open spaces to be adopted by native species.

Archaeological Baseline

11.68 The heritage assets referenced in this section are referred to by their SLR number or designation reference. A full list of Historic Environment Records and their associated Designation References, Dumfries and Galloway Council HER reference numbers, and Historic Environment References can be found in **Technical Appendix 11.1**.

Prehistoric Context

11.69 There are no heritage assets of prehistoric date recorded within the Site boundary. Within the 1km study area, there are four known prehistoric heritage assets.

11.70 **SM12029** is located approximately 0.58km to the south of the Site boundary. This asset comprises a double ditched sub-rectangular enclosure, likely of Iron Age date, interpreted as the remains of a farming settlement. The scheduled extent is surrounded by larger remains, **SLR11** and **SLR12**, recorded in the Dumfries and Galloway HER, which represent an area of prehistoric field boundary remains which are likely to be associated with **SM12029**. **SLR11** and **SLR12** are located approximately 0.74km and 0.46km to the south of the Site boundary, respectively.

11.71 A further asset of Iron Age date, **SLR13**, is located approximately 0.27km to the west of the Site boundary, and comprises a decorated glass or glass paste ball recorded during

peat cutting works. **SLR9**, an undated stone ball approximately 0.86km to the west of the Site, is likely to be of similar date and use. A further findspot concerning an arrowhead (**SLR21**) is located approximately 0.73km to the south east of the Site.

11.72 **SLR18** concerns an area of archaeological interest comprising a field system, settlement and linear feature (**SLR18**), located approximately 0.74km to the north east of the Site boundary. Contained within this area of archaeological interest, though outwith the study area, are two scheduled monuments, **SM11947** and **SM12128**. **SM11947** comprises a burial cairn of likely Early Bronze Age date, whilst **SM12128** represents an area of enclosed settlement and an associated droveway. Given the description of **SLR18** provided within the HER, it is possible that this asset is related to the settlement, representing an associated field system.

Romano-British Context

11.73 There are no heritage assets of Romano-British date recorded within the Site boundary nor the study area.

11.74 There is, however, a high amount of Romano-British activity recorded within the surrounding area, including temporary camps and fortlets. The nearest definitive Romano-British heritage asset is an altar stone (**SM11980**) located approximately 1.4km to the south, with Gilnockie Roman Camp (**SM668**) and Broomholm Roman Fort (**SM2524**) located approximately 16km north east of the Site. The Site is also located approximately 6.4km to the north of the World Heritage Site extent of the Frontiers of the Roman Empire. As such, there is evidence of transient activity present within proximity to the Site, demonstrating active use of the landscape by the Romans, potentially as a travel route between Hadrian's Wall and Antonine's Wall. However, there remains no evidence for any activity within the Site itself, nor any evidence suggesting that the study area was ever used for defensive or settlement purposes during this period.

Medieval Context

11.75 There are no heritage assets of medieval date recorded within the Site boundary or the 1km study area.

11.76 The medieval period in the area was characterised by a period of change following the Roman departure from the area. Its location in close proximity to the modern Scotland-England border represented a region of which there was frequent conflict concerning ownership claims, with control of the region being disputed between Britons, Anglian, Scandinavian, Scots and Normans until the latter part of the 12th century. From the 11th century onwards the Normans began to establish baronies from which to control the local area and population, such as at Annan, where the remains of a motte and bailey castle (**SM702**) reflects Norman defensive building, and the war between Scotland and England in the 1400's prompted an increase in defensive buildings such as the bastles and tower houses seen within the wider study area (such as **LB3782**, **LB3489**, **SM12071**, **SM10431**). As such, though remains of a more permanent nature may not be present within the Site boundary, the area surrounding it was almost certainly in use throughout the period, likely for agricultural purposes but not for any dense settlement.

Post-medieval Context

11.77 There is a single recorded heritage asset of post-medieval date recorded within the Site boundary – West Scales Farmstead (**SLR5**) located in the eastern portion of the Site boundary.

11.78 There are eleven post-medieval heritage assets within 1km of the Site, with the first of these **SLR8**, comprising the 18th century Bridge of Sark - Portpatrick military road. The asset is recorded approximately 0.89km to the southeast of the Site boundary, and runs westwards, following the course of the modern B721, which has been constructed over it. The road was built in the 1760s by Major William Caulfield, Inspector of Roads and successor to General Wade, for the purpose of allowing rapid movement of troops to Ireland in times of unrest.

11.79 **SLR19** is the location of the former cottage related to Calvertsholm farm, located just south of the Calvertsholm working farm, and approximately 0.83km to the north east of the Site.

11.80 The remaining nine assets are of an agricultural nature, comprising farmsteads and farmhouses, largely still in use at present.

11.81 The remaining farmsteads are largely clustered towards the south of the Site boundary, along the course of **SLR8**. **SLR1** is located approximately 0.86km to the south west of the Site boundary, whilst **SLR2** is located approximately 0.81km to the south, with **SLR3** and **SLR4** lying slightly further to the east, approximately 0.65km and approximately 0.69km to the south and south east of the Site boundary respectively. Auld Green Farmstead and farmhouse (**SLR10**), which also lies within this cluster, approximately 0.87km to the south of the Site boundary, is the only one of the recorded farmsteads that appears to have been destroyed, with an area of archaeological interest recorded around the area where remains may be expected to survive.

11.82 Three further farmsteads are recorded to the north and north east of the Site boundary, namely **SLR6** and **SLR7**, located approximately 0.85km and 0.96km to the north of the Site respectively. **SLR20** is located approximately 0.85km to the north east of the Site.

Modern Context

11.83 There are no modern heritage assets recorded within the Site boundary or within the 1km study area.

11.84 A review of historic mapping shows that the area around the Site has changed little since the post-medieval period, being largely given over to agricultural practices, as it is today.

Undated Heritage Assets

11.85 There are no undated heritage assets recorded within the Site boundary, with four undated heritage assets recorded within the 1km study area.

11.86 Three undated assets relate to structures, of which two are buildings (**SLR15, SLR17**) located approximately 0.55km and approximately 0.13km to the south west of the Site boundary, respectively. **SLR16** is recorded as a farmstead, located approximately 0.28km to the south east of the Site boundary. Both **SLR15** and **SLR17** can be seen on historic mapping, with **SLR15** recorded as a roofed building on Sheet LXIII of the six-inch 1st

Edition OS map of Dumfriesshire, published in 1862. Given its proximity to the railway line, this asset may represent a structure associated with railway infrastructure, such as a signal station. Its placement within an agricultural context may also indicate an agricultural nature, such as a barn or farmstead. **SLR17** appears as an unroofed building or square enclosure surrounded by historic woodland on the same map. Analysis of LiDAR imagery shows a rectangular structure still present underneath the woodland.

11.87 The final undated heritage asset, **SLR9**, relates to the findspot of a white quartzite sphere, bearing six painted roundels, which was recovered during peat milling approximately 0.88km to the west of the Site boundary. The painted aspect of this find is unique, but its form indicates it may be a painted version of Iron Age stone ball gaming pieces recorded elsewhere in southern Scotland.

Previous Fieldwork

11.88 There is no previous fieldwork recorded within the Site or the 1km study area within the HER. However, the area within the Site has been subject to an archaeological walkover as part of a previous planning application (D&GC planning application reference no. 14/P/4/0538) with a similar boundary. This walkover was conducted by Headland Archaeology Ltd on the 25 September 2014, with no new heritage assets recorded.

Historic Mapping

11.89 The area around the Site is first seen on historic mapping from the 17th century, with both Gordon's map 'Sulway fyrth Liddesdale Es[kdale...]', published in 1640, and Blaeu's map 'Annandiae praefectura, Vulgo, The Stewartrie of Annandail', published in 1654 showing the area being devoid of any settlement of note. Blaeu's map is more detailed than that of Gordon, and shows the surrounding settlements of Durnock (Dornock) and Eastrigs (Eastriggs), as well as 'Blaatwood', depicted with a tower and surrounded by woodland, which may refer to Blackwood House.

11.90 The Roy Military Survey of Scotland, published between 1747-1755, records the area in which the Site is located. Whilst there is no detail regarding the land use within the Site, nor the configuration of land parcels, it does record the modern B721, which runs to the south of the Site. In addition, the map illustrates Kirtle Water flowing to the east of the Site. There appear to be three potential farmsteads listed, which are still present today, although their names are too difficult to discern on Roy's Map; their recording does reinforce evidence for post-medieval agricultural activity in the area.

11.91 Crawford's 'Map of Dumfries-shire', published in 1804 is the first depiction of the area around the Site in more detail, showing the location as a large area of bogland named 'Righead Moss'.

11.92 The first depiction of the Site in detail is on Sheet LXIII of the six-inch 1st Edition OS map of Dumfrieshire, published in 1862. On this map, the area contained within the Site boundary is depicted and comprises largely fields in agricultural use, with some areas of bog or moss to the north and south, and a small area of mixed woodland to the northwest, which is still extant to this day. West Scales Farmstead (**SLR5**) is marked in its current location. By the time of the 1900 six-inch OS map (sheet LXIII.NE, Dumfriesshire), there had been little change within the Site, with the exception of the bog or moss within the Site having been drained and more areas taken into agricultural use. This is evident with the reduction of Nutberry Moss, once extending into the Site boundary, the land has been reclaimed and makes up Whitemoss farmstead. Subsequent publicly available OS maps

show no further change in the Site, though the area surrounding the Site to the west appears to have been milled for peat, likely from 1958 onwards.

11.93 No further heritage assets were identified through the review of the historic mapping within the Site.

Aerial Photographs and LiDAR

11.94 The online aerial imagery of NCAP was examined for evidence of archaeological sites. No oblique aerial imagery in the HES archives on Trove was found. No further archaeological sites were identified. Analysis of publicly available LiDAR data revealed no new potential heritage assets.

Discussion of Archaeological Potential

11.95 There are no prehistoric heritage assets currently recorded within the Site boundary. Within 1km of the Site there are five prehistoric heritage assets, include a Scheduled Monument (**SM12029**) comprising an Iron Age enclosure and associated field systems (**SLR11** and **SLR12**), a decorated glass or glass paste ball (**SLR13**) and an undated but likely Iron Age painted stone gaming piece (**SLR9**) found during peat cutting, an arrowhead (**SLR21**), as well as an area of archaeological interest (**SLR18**) containing settlement, field systems, and linear features. The proximity and nature of these assets indicate that the surrounding landscape was actively used during the prehistoric period. The presence of Class I peat in the Site, along the northeastern borders and particularly in the southern portion of the Site provides good conditions for preservation of features and artefacts, as well as palaeoenvironmental information. Where there is Class I and Class 5 peat recorded is anticipated that there is a moderate potential for unknown remains. The archaeological potential outside these areas of peat is considered to be low. Should remains from this period be present on the Site, they would likely comprise finds similar in nature to **SLR13** and **SLR9** or settlement related and be considered to be of medium significance based on their potential to inform on the prehistoric activity and land use in this area.

11.96 The potential for unknown Roman remains within the Site boundary is considered to be low due to the absence of any recorded heritage assets from this period, both within the Site and the surrounding 1km study area. Any remains would likely comprised of transient finds unrelated to settlement, defensive, or larger movement patterns, and therefore be of low significance.

11.97 The potential for unknown medieval remains within the Site boundary is considered to be low due to the absence of any recorded heritage assets from this period, both within the Site and the surrounding 1km study area. While the wider region is well represented in terms of remains from this period, marked by territorial disputes and the establishment of Norman baronies and defensive structures, the lack of permanent medieval features in the immediate vicinity suggests limited settlement or construction activity within the Site itself. Any remains would likely comprise agricultural remains such as rig and furrow, truncated by continued agricultural use of the area within the Site during later periods, and therefore be of low significance.

11.98 The potential for unknown post-medieval remains to be present within the Site is considered to be low. This period is well documented by historical mapping, and any remains would likely comprise agricultural remains associated with West Scales

Farmstead (**SLR5**), such as field boundaries, and therefore would be considered to be of low significance.

11.99 The potential for unknown modern remains to be present on the Site is considered to be negligible, with no evidence of modern heritage assets within the Site or within the 1km study area. Additionally, this period is well documented through mapping and documentary resources, indicating little change in terms of land use over this period.

Future Baseline

11.100 As per ALGAO's Guidance for Peatland Restoration and the Historic Environment in Scotland, peat is classed as a cultural heritage resource due to its unique ability to preserve organic and inorganic archaeological remains. Formed after the ice-age, the peatlands provide a waterlogged and anaerobic environment which leads to a much slower rate of decay for archaeological and palaeoenvironmental remains compared to other soil types.

11.101 The presence of peat within the Site, as detailed in **Chapter 10: Hydrology, Hydrogeology and Geology,** means there is a high potential for environmental or organic deposits to survive. Climate change could affect naturally formed peat deposits leading to the destruction of palaeoenvironmental evidence. This might result in the loss of previously unrecorded cultural heritage assets.

11.102 Other impacts of climate change on buried remains might result from increased rainfall and fluctuating temperatures, with the sequence and frequency of natural soil saturation and desiccation changing the preservative conditions. This might result in damage or loss of organic artefacts. For upstanding remains, such change has the potential to result in increased water penetration, which may then cause/accelerate erosion/decay of historic fabric.

11.103 Notwithstanding the above, it is considered that the description of the baseline conditions remains robust for purposes of this assessment, and that it allows for a robust assessment of the impacts of the Proposed Development on cultural heritage.

Assessment of Effects

Embedded Measures

11.104 The assessment of potential direct impacts on heritage assets is based on the maximum likely impact that could be caused by the Proposed Development.

11.105 A micrositing buffer of 50m for wind turbines, and 75m for all other infrastructure is requested for the Proposed Development. This allows for unforeseen impacts on potential archaeological features to be avoided, where possible. Further information on embedded measures can be found in **Chapter 2: Site Description and Design Evolution**.

Potential Construction Effects

11.106 Direct Impacts on the setting of designated heritage assets as a result of construction activity are considered to be minimal at most and temporary in nature. The worst case scenario for settings impacts, comprising the completed proposed development, are considered under **Operational Effects**.

11.107 Direct (physical) impacts would comprise any groundworks or other ground disturbance undertaken as part of the construction phase of the Proposed Development. Specific activities which have the potential to cause impacts through the construction phase of the Proposed Development include:

- four wind turbines, including foundations and crane hardstandings;
- access tracks;
- underground cabling;
- one substation compound;
- Battery Energy Storage System (BESS);
- one anemometry mast;
- solar arrays, suspended on module frames anchored to the ground via steel piles, driven approximately 1.5m to 3m below ground; and
- two temporary construction compounds.

11.108 Where ground disturbance takes place, these activities would remove, truncate or change any heritage assets located within the area of ground disturbance. Damage to heritage assets caused in this way would be permanent and irreversible. With regards to the impacts identified below, proposed additional mitigation is outlined in Section 11.6.

Known Remains

11.109 There is a single asset within the Site – West Scales Farmstead (**SLR5**). The proposed Site layout (**Figure 11.1**) would result in no direct (physical) impacts on this asset. The nearest development, including temporary, would be the proposed met mast approximately 0.45km to the west. As such, the magnitude of change is assessed as None. On a heritage asset of low significance this results in a **Nil** significance of effect.

Unknown Remains

11.110 There is potential for the presence of unknown palaeoenvironmental remains and prehistoric remains. The contribution of palaeoenvironmental or prehistoric remains towards understanding historic landscapes would be considered to be of medium significance. This highest potential for paleoenvironmental remains exists in the areas of Class I and Class 5 peat, along the northern and southern portions of the Site. The potential for prehistoric remains exists throughout the Site, in addition to the increased potential within the areas of Class I and Class 5 peat.

11.111 Multiple elements of the Proposed Development would be sited within areas of peat within the Site, including the solar arrays. The metal frames on which the solar PV panels would be mounted on are piled into the ground up to 3m. However, the actual footprint of displaced soil with this method is very minimal. The highest level of impact would come from the proposed track, crane hardstandings, construction compounds, and wind turbines where there is the possibility of complete removal of remains.

11.112 Where the Proposed Development would result in the complete removal of any unknown remains of medium significance, the magnitude of change is assessed as High Adverse, resulting in a **Moderate** significance of effect. ‘Complete removal’ would be determined dependent on the type of remains, their extent, and professional judgement.

11.113 Due to the unknown nature or number of the unrecorded remains and based on the above assessment, professional judgement has been applied and these effects have the potential to be considered significant in EIA terms. This is based on potential rather than known archaeological remains. If not present, no significant effect would be found.

11.114 For all other periods, a potential of low has been assessed. If present, it is considered that these would not be of enough significance to warrant additional mitigation.

Table 01-6: Potential Direct Construction Effects

Asset	Infrastructure	Cultural Heritage Significance	Magnitude of Change	Significance of Effect	Is the Effect Significant In EIA Terms?
West Scales Farmstead (**SLR5**)	All ground breaking activities	Low	None	Nil	No
Unknown Paleoenvironmental remains	All ground breaking activities within areas of peat	Medium	High Adverse*	Moderate	Yes – only where complete removal of remains
Unknown Prehistoric Remains	All ground breaking activities within areas of peat	Medium	High Adverse*	Moderate	Yes – only where complete removal of remains

**Where High magnitude of Impact, this assumes entire extent of remains would be completely removed.*

Potential Operational Effects

11.115 Impacts during the operation of the Proposed Development will relate to changes within the setting of cultural heritage assets. In agreement with HES and D&GC Archaeology Service, the assets listed in **Table 11-7** have been scoped in for assessments on their setting. The justification for asset's scoped out of detailed assessment is provided in **Technical Appendix 11.2**.

11.116 These assessments have been conducted based on the potential impact of the Proposed Development as a whole. The appended visualisations (**Figures 11.4 – 11.19**, **Figure 7.23**) display the visibility of the upstanding elements of the Proposed Development, comprising the proposed wind turbines, solar array, and met mast.

11.117 In reference to both Stapleton Tower (**LB3782**) and Mossknowe House (**LB9799**) there is woodland present which screens the development. In both cases, the woodland is not commercial and is unlikely to be intentionally felled, however, the assessment has been made in the instance where these woodlands have been felled and no longer screens the Proposed Development.

Table 01-7: Assets Scoped in for Further Assessment

Designation Reference	Designation Title	Type of Asset
LB9799	Mossknowe House	Category A Listed Building
LB3489	Bonshaw Tower and House	Category A Listed Building
LB3782	Stapleton Tower	Category A Listed Building
SM12071	Woodhouse Tower, tower house	Scheduled Monument
List Entry: 1000098	Frontiers of the Roman Empire: Hadrian's Wall	World Heritage Site
SM11947	Calvertsholm Cottages, cairn 315m WNW of	Scheduled Monument
SM11950	Calvertsholm Cottages, cairn 320m NNW of	Scheduled Monument
SM11951	Blackyett, cairn 224m E of	Scheduled Monument
SM11987	Robgill Mains, cairn 320m E of	Scheduled Monument
SM12128	Calvertsholm, settlement 110m N of	Scheduled Monument
SM11994	The Bracken, enclosed settlement and droveway 3280m WSW of	Scheduled Monument
SM12157	Robgill Tower, fort 90m NW of	Scheduled Monument

Mossknowe House (LB9799)

Description

11.118 Mossknowe House is a Category A listed house, built in the neo-Palladian style and is considered a medium sized country house. It was built in 1767 to replace a previous house by the local William Craik of Arbigland, who designed and built two other buildings in the area. Arbigland House and its policies near Dumfries hold many architectural and design parallels to Mossknowe House. According to the available information, much of the interior plan has been retained, except for an 1840 addition of a bay window on the southern elevation of the ground floor library. This addition suggests a change in use of the central ground floor room and/or a potential intention for appreciating the external views. From these bay windows of the ground floor library looks out onto the estate grounds to the southeast, where the immediate grounds drop away to the Kirtle Water, ending at the edge of the estate marked by a line of mature trees.

11.119 Beyond the significance derived in the intentional change of design in the 1840s, the house's internal design and features are considered to be less important to its architectural interest. Instead, its architectural interest is largely in its appreciation of its front façade and elevation.

Architectural/ Historic Interest:

11.120 In traditional neo-Palladian style, the symmetry of the facades are key to understanding and appreciating this style – of which Mossknowe House is a notable example. The landscape in front of the house supports a natural vantage from which to appreciate the

symmetry of the house. This is seen as a D-shaped meadow, bounded by low stone walls extending from the northeastern facade. The top of this meadow is roughly comparable to a location where trees were once planted (OS Six Inch map[6]) and represents the furthest location from the house from which the symmetrical façade could be appreciated. **Figure 11.6** shows the photograph taken from this point. Other aspects of its historic and architectural interest which are derived from its setting are described below.

Contribution of Setting to Cultural Significance

11.121 The house sits within ornamental parkland, which still survives in parts best seen by the areas of mature woodland surrounding the house and along its drives. The historic estate grounds are defined by the non-inventory GDL 'Mossknowe House' (**MDG25691**).

11.122 The principal elevation of the house is to the northeast, approached by two curving entrance drives – one from the northeast and the other from the northwest. The earliest detailed mapping of Mossknowe House after its construction is the First Edition OS map, published in the OS Six Inch map (published 1862)[7], which shows two approaches to the house as extending from the two lodges (North Lodge - **NHRE 262360**, South Lodge – no longer extant) situated at the main road, the current B7076 and junction of the A74. Due to the current and historic wooded nature of the estate boundaries, the first glimpses of the house are only apparent on these drives at a close distance. These views are likely to have been intentional to the design of the approach, and as such, are considered important to the cultural significance of the house. It is worth noting that until the house is reached, the house is never fully visible due to the trees along the drives. It was likely never intended to be fully visible until the visitor stood right in front of the house appreciating the symmetrical nature of the house. As such, it is the central view, seen in **Figure 11.5**, that is of more importance than those along the drives.

11.123 Views from the front elevation of the house are considered to be moderately distanced. The meadow formed between the two drives remains mostly open but is enclosed by a large patch of woodland to its north, screening the B7076 and A74 from view and closing any further views. These trees are seen on earlier maps, notably the First and Second Edition OS maps (Published 1862 and 1900)[8] and were likely either planted when the house was first constructed or at least utilised as part of the estate boundaries.

11.124 There are moderately distanced views from the south western elevation where the open parkland drops away towards the Kirtle Water, approximately 0.3km away. The Kirtle Water is the southern boundary of the historic estate, as seen as the shaded area on the OS First Edition Map. The current views similarly stop at the Kirtle Water where there is a swath of large mature trees. These trees are part of the ornamental parkland planting and are considered to be original to the setting of the house. As seen in Roy's Military Survey of Scotland – Lowlands (published 1752) just before the construction of the house, there are large areas of trees bordering the Kirtle Water in the same location as today. Subsequent mapping of the First Edition Map (published 1862) show these trees in more

[6] Dumfriesshire, Sheet LVIII Survey date: 1858, Publication date: 1862

[7] Dumfriesshire, Sheet LVIII Survey date: 1858, Publication date: 1862

[8] Dumfriesshire LVIII.SE, Surveyed: 1898, Published:1900

detail, with them following the course of the Kirtle Water and the shaded extents of the estate on its southern side.

11.125 Due to the planted wooded boundaries of the estate lands, views beyond the estate were likely not intentional and therefore not key to the understanding of Mossknowe House. Instead, the key views from the main axes of the house were designed to appreciate the more localised setting in which the house was placed.

Views key to the Cultural Significance of Mossknowe House:

- Views to the north east from the front elevation of the house towards the planted trees at the edge of the meadow;
- Views from the back elevation southwest across the open parkland, ending at the edges of the historic estate boundaries at Kirtle Water, visible as the historically planted trees. Visualisations taken to represent this view were from within the house on the ground floor and from the top floor bedroom[9], both located centrally in the house (**Figure 11.7**, **Figure 11.8**);
- Views from the meadow at the front of the house, from which the symmetry of the neo-Palladian style can be appreciated (**Figure 11.4**, **Figure 11.6**); and
- Views towards the house from its entrance drives, particularly where the first glimpses of the house are visible. This visualisation was taken from the east entrance drive (**Figure 11.5**).

Proposed Development Effects

11.126 The ZTV, presented in **Figure 11.3**, indicates that up to four wind turbine tips would be visible from Mossknowe House and the Mossknowe Policies in a bare earth scenario. The nearest of which, T1, would be 2.1km from the house.

11.127 The photomontages showing the front elevation of the house, presented in **Figure 11.4** and **Figure 11.6**, show that the Proposed Development would be mostly screened by the house, such that only the tips of T1 and T4 are visible, though hidden by the mature woodland surrounding the house. When viewing the façade, which is one of the key elements of cultural significance, the visible turbine tips would introduce only a very slight kinetic element over the west wing, shown in the right of the visualisation, in theory introducing a very slight distraction from the appreciation of its symmetry. If the mature woodland were not present, this would be a visual change which would be discernible only to a very small extent.

11.128 The photowire and photomontage of the approach, presented in **Figure 11.5** indicates that the turbines of the Proposed Development would feature sporadically in views along this drive, with the potential for the met mast to be visible. The wireline presented in **Figure 11.5g** indicates that in a bare earth scenario some elements of the solar array and the met mast would be present in views, however, as evidenced by the photowire and photomontage the solar array would be outwith any views due to vegetation screening. These are partially screened by the current mature trees and hedging, including those on

historic mapping contemporary with the construction of the house on the estate, marking the estate boundaries. When travelling along this drive on approach to the house, the viewer is increasingly facing east, which places the house increasingly separate from any of the visible infrastructure such that it is never backdropped by the turbines. While there would be some level of distraction, where the kinetic elements of the turbines would be visible in some views, these are not anticipated to affect the appreciation of the house from this angle more than a very slight extent.

11.129 The photowires and photomontages from the interior of the house, presented in **Figure 11.7** and **Figure 11.8,** indicate that the Proposed Development would feature in views to the south west through the window of the library and the first floor bedroom. These current views are largely dominated by the remaining swath of historic woodland at Kirtle Water, obviously marking the edge of the estate. The Proposed Development would be offset from the views set outside the bay window, with the tips of T2, T3, and T1 visible from the top floor bedroom and T4 from the ground floor library window, where they appear above the tree line. This would add a modern element into these views, which were intended to appreciate the interior of the estate lands between the house and the Kirtle Water – the visible boundary itself being an aspect of this appreciation. The tips of the turbines would distract from the stationary aspect of these views and introduce a kinetic change to these historic views. If the trees along Kirtle Water which currently screen portions of the Proposed Development were either partially or wholly removed, the entirety of the turbines, met mast, the solar array, and substation would likely be visible and there would be increased visibility in these views. However, the additional visibility of the solar array, met mast, and substation would not cause a further distraction than the kinetic elements of the wind turbines. With the trees still in this view, the main appreciable aspects of this view, are still intact and with this modern intrusion, is only distracted from to a slight extent.

11.130 Three aspects of the asset's setting which contribute to its cultural significance would be impacted by the Proposed Development. These are in the ability to appreciate, understand, and experience the view of the main façade, the views along the approach, and the views to the estate grounds from central rooms of the house. Separately, there would be the potential for minimal adverse effect at most on these contributors. The majority of weight is placed on the view of the front of the house, as this is the main contributor to the cultural significance of the house and is more sensitive to change. Other key contributors to the house's cultural significance, specifically views to the northeast from the house, its relationship with other built elements of the estate, and its architectural interest would be retained and largely unaffected.

11.131 On balance, it is considered that the Proposed Development would have an overall Low Adverse magnitude of change. On an asset of High significance, this would result in a **Minor** significance of effect. This is considered **not significant** in EIA terms. The main view of historical and architectural appreciation, the symmetrical northeastern façade, as well as the preservation of views towards the extents of the historic estate are only minimally affected in certain views, with the majority of key views unaffected. When viewed within the context of NPF4 Policy 7c), it is considered that the character, architectural interest and historic interest is preserved adequately.

Bonshaw Tower and House and Courtyard Walls (LB3489)

Description

11.132 The asset is a tower house, primarily constructed in the mid-16th century, with the addition of a country house to its northeast, constructed in 1770. The two structures were joined by a low corridor in 1896. The asset derives a large part of its significance from its architectural interest, namely due to the excellent preservation of the tower house itself, as well as the addition of the well-preserved 18th century country house. The addition of the country house, as well as the various renovations that have occurred, show the continued use of the tower house and the surrounding land, demonstrating different architectural styles and the development of techniques throughout multiple periods.

11.133 The asset has historic interest through its connection to the Irving Family. The Irvings were an important family within the Scottish borderlands and Bonshaw Tower and House acted as a family seat, with a direct line of succession, from their original construction until 1954. The asset is still owned by the Irving family, albeit a different line of descent, and as such, the almost 500 years of association with a single family form part of the tower's cultural significance.

Contribution of Setting to Cultural Significance

11.134 The setting of the house is directly related to the placement of the tower, acting as an extension to the tower to facilitate its use from the 18th century onward. The tower's placement would have been strategic and, as such, forms the basis for the setting of both the tower and the house. Tower houses were generally built as defensive structures, monitoring specific areas of movement, such as watercourses, borderlands, or travel routes, protecting the estates and family lands within which they were built. The 16th century was a period of intense conflict along the Anglo-Scottish border, with the Border Reivers conducting raids throughout the Solway Plain, which remained an area of contested borderland. As such, the primary aspects of the asset's setting which contribute to its significance are its defensive characteristics, as well as its ability to command and control access through key points in the landscape.

11.135 The asset is placed on the western bank of Kirtle Water, with the river running through a ravine roughly north west to south east. Old Caul Burn runs to the south of the asset, connecting to Kirtle Water. Both watercourses form part of the asset's defences, with a walled courtyard having extended to the north and west where such natural elements were not present. Due to its proximity to the Solway Firth and its location crossing the Solway Plain, Kirtle Water is a key routeway through the landscape, almost mirrored by the modern A74(M) located approximately 0.6km to the east. The inhabitants of the tower would have been able to monitor those approaching along the length of the river, originally both to the north west and south east, and the surrounding land, which forms this key route through the landscape. The height of the tower would have likely allowed for wide-ranging views and for inhabitants to monitor access through the wider landscape. Further to monitoring those approaching, the inhabitants would have been able to control access along the course of the river and the valley. The placement of the house to the north of the tower has obstructed views in this direction, meaning that the ability to understand, appreciate and experience the asset's views to the north is diminished.

11.136 The key approach towards the tower house and the attached country house appears to be along a designed driveway from the north, opening out at the west of the house to provide

views of the architecture of both the tower and the later additions. This east-facing view acts as a point of appreciation for the architecture of the house.

11.137 At its construction, the tower house would have acted as an imposing presence to those approaching. The tower would have been intended to be visually dominant within key approaches, acting as a display of power for the Irving family. Whilst the tower would have been prominent when approaching from all directions, the addition of the country house to its north has diminished the tower's prominence, disrupting views of the tower on the approach from the north and ensuring that the tower is no longer prominent within the landscape and instead forms part of the house. As such, these aspects of the asset's setting are compromised. More weight is placed on the other aspects of setting, which can still be readily experienced and appreciated, such as the outward views.

11.138 The tower lies within a network of tower houses which are spread throughout the Solway Plain. As noted, the Irving Family owned the surrounding land, and they had constructed three additional tower houses within the vicinity of the asset. These are:

- Robgill Tower (Category B Listed **LB3789**) 0.69km south east;
- Woodhouse Tower (**SM12071**) 1km to the south east; and
- Stapleton Tower (Category A Listed **LB3782**) 3.2km south west;

11.139 Both Woodhouse Tower and Robgill Tower are located along the banks of Kirtle Water and would have shared intervisibility with Bonshaw Tower, especially when all towers were at their intended height. Whilst forming part of the lands of the Irving Family, Stapleton Tower does not share visibility with the asset, nor with any other the other Irving tower houses. The proximity of the towers to each other allows us to directly compare their construction and understand more about the way the Irving Family controlled their estate. Furthermore, the way that the towers interacted as part of a defensive network, all controlling access and acting as a sign of power within the same aspect of the landscape, is of significance.

Proposed Development Effects

11.140 The ZTV (**Figure 11.3**) indicates that four wind turbines would be visible from the tower, with the nearest of which, T4, located approximately 4.6km south east. **Figure 11.19** represents the view from the base of the tower and demonstrates that four turbine tips would be visible in a bare earth scenario. No other elements of the Proposed Development are anticipated to be visible.

11.141 There would be no visibility of the Proposed Development in views from or when approaching the asset from the north, east, south east, or west as the Proposed Development would not be present within these views. Consequently, there would be no impact on key approaches from these directions, nor on points of appreciation of the asset's architecture or on views towards the asset from the contemporary tower houses.

11.142 The Proposed Development may feature when approaching the asset from the north west, however, due to the presence of the attached house, the tower is no longer visually dominant within the landscape. As such, the asset's intended visual prominence no longer contributes to its significance, and any introduction of turbines into views to or from the asset would not impact the ability to understand, appreciate, or experience this aspect of its setting.

11.143 As evidenced by **Figure 11.19**, up to four wind turbine tips would be present in a bare earth scenario when looking south east from the asset along Kirtle Water. This also includes key views towards Woodhouse Tower (**SM12071)** and Robgill Tower (**LB3789)**. The proposed wind turbines would not be present directly behind the contemporary assets, nor would they be present in direct line of sight along the river. The wind turbine tips would be present on the periphery of these views in a bare earth scenario. It is unlikely that these would be visible at all due to screening from the built environment, namely agricultural buildings, but even if fully visible, the presence of four wind turbine tips would form only a very slight distraction to the appreciation and experience of the asset's connection to the nearby contemporary defensive assets, and its control of the Kirtle Water Valley.

As outlined above, one aspect of the asset's setting would be subject to a very slight distraction - the views to the southeast along Kirtle Water. The ability to understand the asset's placement within the landscape would not be affected, and therefore, the asset's cultural significance would be eroded only to a very minor extent. The magnitude of change would be Very Low Adverse, which would result in a significance of effect of **Very Minor** which is considered **not significant** in EIA Terms.

Stapleton Tower (LB3782)

Description

11.144 This asset is a three storey stone built tower house measuring 13m in length, 8.3m in width and standing 15m in height, with its principal façades facing south east and north west. It was constructed in the 16th century by Edward Irving [of Stapleton] as a standalone structure with wide-mouthed gun loops around its base course. It was built with similar features to other tower houses in the area, notably the slightly earlier Bonshaw (**LB3489**) and Robgill (**SM12157**) tower houses.

11.145 After the death of Edward Irving, the tower was acquired by Fergus Graham of Blawatwood, leading to a contest of ownership by Edward's sons. Directed by the Privy Council, this led to multiple sieges and attempts to take the tower back by force over the subsequent centuries. By the early 19th century, the tower had been abandoned as a residence and fell ruinous. It was restored by the Critchley family and incorporated into a baronial mansion to the north, north east and north west. By 1950, the house was abandoned and demolished, leaving the tower standing alone in the remnants of the policies. The tower is currently situated on a flattened terrace, bounded by a low sandstone wall, indicative of the boundaries of the previous mansion.

11.146 The tower's historic and architectural interest is derived from its physical elements which are particularly well preserved. As such, a portion of its cultural significance is derived from its physical architectural characteristics. The remaining significance of the tower is derived from its setting.

Contribution of Setting to Cultural Significance

11.147 The tower's placement would have been strategic and, as such, forms the basis of its setting. Tower houses were generally built as defensive monuments, monitoring specific areas of movement, such as watercourses, borderlands, or travel routes, protecting the

estates and family lands that they were built on. They are often the only upstanding remains which indicate the medieval estate lands and ownership[10].

11.148 The estate lands associated with Stapleton Tower are designated as a non-inventory GDL by D&GC (**MDG25654**), delineated by the B6357 to the southeast, the C43 to the west and mature trees to the north and north east. Roy's Military Survey Lowlands (1752), the earliest detailed mapping available of the tower, indicates that the land to the south and west were marked and attached to the tower, which stood centrally in the marked lands. This would indicate that, at the very least, the tower was built to protect the lands immediately surrounding it, with views over this ground surrounding and composing its immediate setting.

11.149 Since the construction of the attached mansion in the 1800s and more detailed historic mapping which details the adjacent fields, bounded by mature trees on field boundaries and the mature Crow Wood to the north east, east and west. Whether or not these trees were originally part of the tower's setting, they still allow for the appreciation of the immediate fields which would have composed this aspect of the tower's setting. They do, however, partially screen longer distance views to the southeast, where the tower is orientated.

11.150 As the mansion was a later addition, neither its presence nor its remains contribute to the original setting of the tower.

11.151 Beyond its immediate setting, Stapleton Tower was built with a distinct prospect from its south east façade, overlooking the wider Solway Plain – a low lying landscape bordering the Solway Firth. The Solway Plain is characteristically flat where the elevation scarcely rises above 10m AOD. In the medieval period, the plain was improved for agricultural use, to support the burgeoning medieval settlements located along the Firth. The low elevation and the comparatively high elevation of the tower at 50m AOD grants the tower long distance views to the southeast reaching beyond the Solway Firth to where the Lake District Hills are visible. To the north, north east, and north west of the Tower the ground rises to the distant hills of the Lowther and Langholm Hills of the Southern Uplands.

11.152 Stapleton Tower's significance lies in its commanding long distance views across the Solway Plain, particularly to the south and south east. In the 16th century, when conflict along the border was rife and Border Reivers carried out frequent raids, such views provided a crucial defensive advantage. Unlike most tower houses in the region which were built along watercourses and natural routeways, Stapleton Tower occupies a rise at 50m AOD, elevating it above surrounding features and ensuring clear sightlines. Its south east orientation further suggests these views were deliberately chosen to monitor activity across the plain. Despite the proximity and similarity of style, the tower holds no intervisibility with other tower houses and, as such, intervisibility with other tower houses in the area is not a key element of its setting.

11.153 The current setting of the tower comprises agricultural fields, delineated by both wood fencing and mature trees, agricultural buildings, residential properties – the nearest being 100m to the north, and distant radio masts on the other side of the Solway Firth approximately 6km south west. Long distance views to the east, north east, and west are blocked by mature woodland, particularly Crow Wood to the north, north east, and east.

[10] RCHMS (1997) Eastern Dumfriesshire: an archaeological landscape.

Immediately surrounding the tower is the terraced remains of a low sandstone wall and stairs to access the terraced land, a remnant of the former mansion, which was once attached. No other remains are visible. Despite some changes within its current surroundings, the asset's setting remains a key contributor to its cultural significance. While infrastructure and modern elements exist, the largest of which are at such a distance that its setting can still be appreciated, understood, and experienced. The setting is therefore still highly sensitive to further change.

Proposed Development Effects

11.154 The ZTV (**Figure 11.3**) indicates that four wind turbines would be visible in views to the south east of the asset, the nearest of which, T4, would be approximately 3km to the south east.

11.155 The wireline presented in **Figure 11.12b** indicates that the Proposed Development would feature prominently in views to the south east, with four turbines, the met mast and a section of the solar array visible. The visible elements of the Proposed Development would be directly in views outward from the main orientation of the tower, described above as one of its primary aspects of setting which contribute to its significance. The height and proximity of the wind turbines and the met mast to the asset would cause a clearly discernible distraction to the appreciation and experience of this aspect of the asset's setting, additionally affecting the ability to understand the tower's placement in the landscape. This is due to the dominating effect the wind turbines and met mast would have on appreciating this vista across the "Borderlands" and lower topography of the Solway Plain. The photomontage presented in **Figure 11.12h** shows that the wind turbines would be largely screened by the mature woodland to the east of the tower. Crow Wood has been present since at least the mid-1850s (OS First Edition) yet, given the orientation of the tower, is not believed to form its original setting, as it would screen the views from the main aspect of the tower. Although designated as Ancient Woodland and less vulnerable to felling than commercial forestry, it remains subject to natural risks such as fire or storm damage. Accordingly, these trees are not regarded as permanent screening, nor do they contribute to the original setting of the tower. As such, this assessment is based on the assumption that they are temporary screening, thus the wind turbines, solar array, and met mast behind the woodland still introduces a visual change to the asset's setting.

11.156 Another aspect of the setting that contributes to the tower's cultural significance is the more localised views of the adjacent land. The proposed wind turbines would only cause a minor visual distraction when looking towards the fields in the southeast, as they would draw the eye upward from the land to where they appear at the edge of the nearest field.

11.157 Two aspects of the asset's setting would be impacted, reducing to an extent the ability to appreciate, understand, and experience the tower's placement. When overlooking the Solway Plain there would be a discernible impact on these views and a slight distraction in more localised views. These are the main contributing factors to the cultural significance of the tower and as such it is considered that, overall, there would be a Medium Adverse change on the overall cultural significance of the asset.

11.158 As a monument of high cultural significance and of a high sensitivity of change to its setting, the magnitude of change as a result of the Proposed Development would be Medium Adverse, which would result in a **Moderate** significance of effect. This is considered significant in EIA terms.

11.159 The historic link and interest preserved in the architectural detailing, its physical preservation, and the footprint of the mansion visible in the land surrounding are still retained and unaffected by the Proposed Development. When viewed within the context of NPF4 Policy 7c), it is considered that the character, architectural interest and historic interest is preserved adequately.

Woodhouse Tower, tower house (SM12071)

Description

11.160 The asset is a later 16th-century tower house, constructed by the Irving family after they had purchased the surrounding lands, and restored in 1877. The tower is now ruinous, with only the north east portion surviving to wall-head height (approximately 2m), and the footings of the north west and south east walls remaining visible. The tower would have measured 9.6m by 7m, with the walls reaching up to 1.7m in thickness. Whilst the tower is ruinous, with only small portions of the masonry remaining, there are still distinctive architectural features visible, including cornicing, a vaulted basement, an aumbry and roll-moulded jamb for a fireplace, and evidence of multiple floors. Furthermore, the turf-covered footings of a barmkin (a defensive enclosure) run from the west-south west of the tower around to the south west. The asset's significance is derived in part from its intrinsic characteristics, both from the visible upstanding remains and the potential for further buried remains and artefacts. Archaeological investigation would enhance our understanding of the construction and layout of 16th-century tower houses, as well as our understanding of the socio-economic circumstances of the time period, the social standing of the Irving Family and further information about society during this time period. Furthermore, an investigation of the asset would enable an understanding of the 1877 renovation works and techniques.

Contribution of Setting to Significance

11.161 The asset's contextual characteristics, namely its setting, also contribute to its significance. Tower houses were generally built as defensive structures, monitoring specific areas of movement, such as watercourses, borderlands, or travel routes, protecting the estates and family lands within which they were built. The 16th century was a time of high conflict along the Anglo-Scottish border, with the Border Reivers conducting raids throughout the Solway Plain and the area remaining a disputed borderland. As such, the primary aspects of the asset's setting which contribute to its significance are its defensive characteristics, as well as its ability to command and control access through key points in the landscape.

11.162 The asset is situated on the eastern bank of Kirtle Water, a river which flows northwest to southeast, before entering the Solway Firth approximately 8.5km to the southeast. Due to its proximity to the Solway Firth and its location crossing the Solway Plain, Kirtle Water is a key routeway through the landscape, almost mirrored by the modern A74(M) located approximately 0.25km to the assets north. The tower house is situated at 70m AOD, above the river, which sits approximately 10m lower to the west. The river would act as a defence on the western side of the tower, providing a natural barrier for anyone approaching from the west. The inhabitants of the tower, considering the original intended height of the tower, would have been able to monitor those approaching along the length of the river. Whilst the land does slope gently upwards on either bank of the river, the intended height of the tower would also have allowed for moderate, wide-ranging views and allowed inhabitants to monitor access through the wider landscape. Further to

monitoring those approaching, the inhabitants would have been able to control access along the course of the river.

11.163 Whilst no longer at its true height, the tower house would have been an imposing presence to those approaching through the landscape. The tower would have been intended to be visually dominant, acting as a display of power. Whilst the main entrance of the tower house is not evident, the approach towards the asset was likely along the length of the watercourse (roughly northwest to southeast), and as such, it is these views where the asset's prominence would have been of most significance. However, the ruinous nature of the asset is such that the intended visual dominance of the tower is diminished and the ability to understand, appreciate and experience this aspect of its setting is no longer intact. As such, more weight is placed on the other aspects of the asset's setting, which can still be readily experienced and appreciated, such as the outward views.

11.164 The tower lies within a network of tower houses which are spread throughout the Solway Plain. As noted, the Irving Family owned the surrounding land, and they had constructed three additional tower houses within the vicinity of the asset. These are:

- Robgill Tower (Category B Listed **LB3789**) 0.3km north west;
- Category A Listed Bonshaw Tower (**LB3489** 1km to the north west; and
- Stapleton Tower (Category A Listed **LB3782**) 3km south west.

11.165 Both Bonshaw Tower and Robgill Tower are located along the banks of Kirtle Water and would have shared intervisibility with Woodhouse Tower, especially when all towers were at their intended height. Whilst forming part of the lands of the Irving Family, Stapleton Tower doesn't share visibility with the asset, nor with any other the other Irving tower houses. The proximity of the towers allows us to directly compare their construction and understand more about the way the Irving Family controlled their estate. Furthermore, the way that the towers interacted as part of a defensive network, all controlling access and acting as a sign of power within the same aspect of the landscape, is of significance.

11.166 The asset's current setting comprises its placement within an agricultural field, bounded by trees on the north, west and south. A railway, part of the West Coast Main Line, runs along the northern edge of the field, and the A74(M), a major arterial motorway, runs approximately 0.25km to the north east. Despite these modern intrusions to the east of the asset, and the asset's ruinous state, the asset's placement along Kirtle Water and the associated key routeways is able to be understood. The modern aspects provide an element of distraction to the ability to appreciate and experience the asset's setting, drawing the eye eastwards instead of along the river itself. However, despite these elements, the asset's setting remains sensitive to change.

Proposed Development Effects

11.167 The ZTV (**Figure 11.3**) demonstrates that there would be visibility of all four wind turbines at the south west of the asset, with no visibility of wind turbines in the north east. The closest turbine would be T4, located approximately 3.8km to the south east.

11.168 The wind turbines and the met mast would be peripheral in views to the south east when looking along the length of Kirtle Water, as evidenced by **Figure 11.17b**. Whilst the wind turbines and met mast would be screened in part by the trees lining the river, these trees have the potential to be removed and would have less foliage in the winter months. The placement of the asset along this key routeway would still be understandable, with the

defensive nature of the asset's placement and its positioning along the watercourse still apparent. However, the introduction of the wind turbines and met mast has the potential to draw the eye away from the watercourse and, in turn, cause a distraction to the ability to appreciate and experience the assets intended south eastern views.

11.169 The wind turbines and met mast would not be present when approaching the asset from the south, particularly when approaching along the path of Kirtle Water, and they would not be present when looking northwest towards the nearby contemporary tower houses. As the Proposed Development would be present to the rear of the viewer, it would not cause a distraction to the ability to understand, appreciate or experience this aspect of the asset's setting.

11.170 The ZTV (**Figure 11.3**) indicates that there would be limited, if any, visibility of the Proposed Development when approaching the asset along Kirtle Water itself; however, there would be increased visibility of the Proposed Development from the agricultural land on either side of the river. The proposed wind turbines would not be present directly behind the asset within these key views. Due to the reduced dominance of the asset due to its ruinous nature, this aspect of the asset's setting is no longer as highly sensitive to change, and any minor distraction from the peripheral views of the wind turbines would not contribute greatly to the overall magnitude of change on the asset's cultural significance.

11.171 When approaching the asset and in views from **LB3789** and **LB3489**, as evidenced in **Figure 11.19b**, the Proposed Development would introduce four wind turbines and a met mast in views towards the south east. The wind turbines would be present on the periphery of these views in a bare earth scenario. It is unlikely that these would be visible at all due to screening from the built environment, namely agricultural buildings, but even if fully visible, the presence of elements of the proposed development would form only a very slight distraction to the appreciation and experience of the asset's connection to the nearby contemporary defensive assets, nor its control along the Kirtle Water Valley

11.172 As outlined above, two aspects of the asset's setting would be subject to a distraction to the ability to experience and appreciate the asset's setting: the views to the south east along Kirtle Water and in views from contemporary assets to the north west. The ability to understand the asset's placement within the landscape would not be impacted and given the reduced sensitivity of its setting from modern elements, the asset's cultural significance would be eroded to a very minor extent. The magnitude of change would be Very Low Adverse, which would result in a significance of effect of **Very Minor** which is considered **not significant** in EIA Terms.

Frontiers of the Roman Empire: Hadrian's Wall World Heritage Site (List Entry: 1000098)

Description

11.173 Hadrian's Wall was constructed as a continuous linear barrier across northern Britain during Hadrian's rule in 122CE. At the time, it was the northernmost frontier of the Roman Empire, until it was succeeded by the Antonine Wall to the north in 142CE. The wall was originally of stone construction, reaching 5m in height and front by a ditch. The construction of the wall was carefully sited to take advantage of the upland terrain it crossed.

11.174 Milecastles (fortlets) were every mile along the length, with watchtowers in each interval. Larger forts were placed on the southern side of the wall and were defined by ditches and banks. Roads, outposts, hinterland forts and supply depots were additional infrastructure associated with the Wall. Hadrian's Wall was effectively abandoned around 410CE, marking the end of Roman rule in Britain.

Outstanding Universal Values

11.175 Hadrian's' wall was inscribed as a World Heritage Site in 1987 as meeting three of the six criteria for cultural sites, established by the UNESCO World Heritage Committee. These are:

> (ii) exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts or town planning and landscape design
>
> (iii) bear a unique or at least exceptional testimony to a cultural tradition or to a civilisation which is living or has disappeared
>
> (iv) be an outstanding example of a type of building or architectural or technological ensemble or landscape which illustrates [a] significant stage [s] in human history.

11.176 The Outstanding Universal Values of Hadrian's Wall are derived from these criteria and are presented in a draft Statement of Outstanding Value (a statement of significance) which has been drafted and is currently under examination by ICOMOS. This has been built upon the original inscription by ICOMOS in 1987 (ICOMOS, 1987). As the Proposed Development will not impact physically on the World Heritage Site or its Buffer Zone, only those aspects of the setting of Hadrian's Wall which contribute to the Outstanding Universal Values are listed below.

a) Its group value as a collection of Roman military sites, civilian sites, and monuments along the length of the Wall which are spatially and visually linked;

b) Its wider value within the context of the Frontiers of the Roman Empire WHS, including its scale which would have dominated the landscape and been a visual barrier;

c) Certain visual characteristics - most relevant in this case is the existence of open views from 'the edge of the Empire' across the Solway Firth; and

d) The geology and morphology of the landscape Hadrian's Wall was built on, which directly influencing the location of the frontier thus contributing to our understanding of its design and function. Wall was skilfully sited to take full advantage of the natural terrain and allow maximum visibility to the north as well as along the frontier system itself.

Contribution of Setting to Cultural Significance

11.177 Where the remains of Hadrian's Wall are upstanding, they are visually impressive in the landscape. However, west of Carlisle the wall largely exists only as buried remains and the course of the wall cannot be easily discerned. The continued development of the land for agriculture, trade, and industry from the medieval period onwards have caused the more localised aspects of the Wall's setting which contribute to the group value (**a**) to be more difficultly perceived as many of its components, which are scheduled, are similarly reduced to subsurface remains. Outward views from the wall to the north, where it once would have monitored for any threat from the north (**c**), have changed with the

development of towns such as Annan, Eastriggs, and Gretna and the associated infrastructure associated with the industrial revolution in the area. Distantly, windfarms are visible against the backdrop of the Lowther and Southern Upland hills. Despite these changes to the landscape over the course of the 2000 years, the fundamental topography of the coast and Solway Plain remains and the visual sense of being at the edge of the Empire is still appreciable.

11.178 The setting for this asset is considered to be highly sensitive to change as despite only some of its Universal Outstanding Value being derived from its aspects of setting described above, the wall is a unique and exceptional monument with the highest value and as such all contributors to its cultural significance are sensitive to change.

Proposed Development Effects

11.179 The ZTV, presented in **Figure 11.1**, indicates up to four wind turbine tips would be visible in views to the north from most of the Wall in a bare earth scenario. The nearest of which, T3, would be approximately 6.1km from the nearest point of the Wall.

11.180 The photomontage, presented in **Figure 7.23** (LVIA VP7), indicates that the Proposed Development would feature prominently in views to the north. These visible wind turbines, solar array and met mast would be in views from various positions along the Wall across the Firth and Solway Plain (**c**), described above as one of its primary aspects of setting which contribute to its Universal Outstanding Value. Although it would be visible, the Proposed Development would only infringe on a portion of these views, and the content of the views is less important to the significance of the Wall as the existence of the view is. The ability to understand the importance of these views would remain intact.

11.181 The visual links between aspects of the Wall, such as its scheduled monuments, and along its course (**a**) would be retained without impact, as the wind turbines would not be visible in these views, which are largely focused east to west. Appreciation of the Wall from third points of view, both from the north and south (**b**), as mentioned are no longer readily appreciable due to the poor preservation of the Wall west of Carlisle and thus any visibility of the Proposed Development would not detract from this aspect of setting.

11.182 The siting of Hadrian's Wall and the use of the natural topography and the appreciation thereof (**d**) has similarly deteriorated with the lack of upstanding remains in this section. As such, any visibility of the Proposed Development would not detract from this aspect of setting. In other lengths of the Wall where upstanding remains have been preserved, this aspect of setting contributes more to the ongoing appreciation, understanding, and experience of the Wall.

11.183 Overall, a single aspect of setting which contributes to the Universal Outstanding Values of Hadrian's Wall would potentially be impacted. This would be a slight distraction in views north of the Wall, where the understanding of the siting and function of the Wall is appreciated and experienced. This equates to a Very Low Adverse magnitude of change. On an asset of the highest cultural significance, this would result in a **Minor** significance of effect. This is **not significant** in EIA terms, and it is considered that the Outstanding Universal Value is protected and preserved.

Calvertsholm Cottages, cairn 315m WNW of (SM11947)

Description

11.184 This asset is a burial cairn, likely dating to the early Bronze Age. It is visible as a turf and grass covered stone mound, situated in a cultivated field. A report in 1967 surveyed the cairn as severely mutilated and robbed, being reduced to 18m in diameter from its original 33m. It was recorded that a possible kerb was visible on the west side. A subsequent report in 1984[11] mentions its distorted form from ploughing and the presence of another mound, approximately 13m in diameter nearby. It is likely this is Calvertsholm Cottages, cairn 320m NNW of (SM11950) located 200m to the north east.

11.185 As a possible kerb cairn, it retains the majority of its key field characteristics, which are its stone mounded construction, central turfed top, a stone kerb. As an unexcavated cairn, it is possible there are burial deposits within.

11.186 The intrinsic characteristics of the asset contribute to its cultural significance, as they have the potential to further our understanding of the construction and placement of Bronze Age burial monuments, as well as our understanding of the wider Bronze Age activity in southwest Scotland.

Contribution of Setting to Cultural Significance

11.187 Burial cairns were constructed as places for Bronze Age people to place their dead and were typically located according to specific landscape and contextual characteristics. They were often placed in proximity to watercourses, and other contemporary monuments typically of funerary or ceremonial significance. As visible monuments they were likely built to be appreciated on approach and as a part of a wider prehistoric landscape.

11.188 The cairn is situated at 30m AOD on the Solway Plain – a flat expanse of land north of the Solway Firth. The ground rises steadily to the west, and drops away to the east, south, and north, where it meets the Kirtle Water approximately 0.4km away. Its position on the rise grants the cairn moderately extensive views across the flat landscape, extending to the north, east and south in particular. Due to the general flatness of the landscape, these views are not particularly dramatic, and its relative prominence suggests that views towards the cairn were more important to its placement rather than outward views.

11.189 From the nearby **SM11950** and on approach from Kirtle Water in the north, the cairn appears as a prominent feature on the horizon. Its relative prominence from this direction are considered to be key views from which the siting of the asset is understood, appreciated, and experienced. Further, the proximity and similarity of **SM11950** suggests a clear visual relationship between the two cairns. The smaller cairn (**SM11950**) physically sits slightly lower in the landscape, and when approaching from the Kirtle Water from its closest point in the north east, the two cairns are aligned. This view is considered a third point of appreciation which contributes to the cultural significance of each cairn.

11.190 There are a number of contemporary monuments nearby, the most notable being **SM11950** approximately 0.2km to the north east, which possesses similar characteristics. The Kirtle Water, running north west and south west, would have been a natural focal

[11] Yates M J (1984) Bronze Age round cairns in Dumfries and Galloway: an inventory and discussion.

point for these burial monuments evidenced by multiple similar cairns along its length, such as Robgill Mains, cairn (**SM11987**) and Blackyett, cairn (**SM11951**) to the north west. While these are not visible from the cairn, they evidence the similarity and importance of the Kirtle Water to the placement of these types of burial monuments. Other nearby cairns, such as Mossknowe (NHRE 66974) approximately 390m to the north west, and Mossknowe (NHRE 66973) approximately 750m to the north east are examples of excavated burial cairns, which have revealed internal cists and grave goods. These cairns have group value which is derived from their type and proximity to each other. While many of the cairns composing this group have been destroyed or are no longer prominent, visibility of these cairns as one travels along the routeway of the Kirtle Water would have been key to the experience, appreciation, and understanding of their placement. As such, of the visual links that survive, views towards and from the Kirtle Water are considered to be key to the cultural significance of Calvertsholm Cottage, cairn (**SM11947**).

11.191 The asset's current setting is rural in nature. The cairn sits within a cultivated field and its views compose more agricultural fields and scattered agricultural outbuildings, the land cut with modern drains. There are a number of other modern elements nearby, including an overhead power transmission line, wooden telegraph poles, and radio transmitter mast. The pylons appear directly behind the cairn on the horizon, when viewing from **SM11950** and on its approach (see **Figure 11.9b)** wind turbines are visible distantly on the horizon, the nearest being Beck Burn Wind Farm approximately 5.8km away to the northeast. A C-road runs along the edge of the field, approximately 0.15km north east of the cairn. Modern farm buildings are approximately 0.2km to the south east of the cairn. Some commercial plantation is visible across the landscape, particularly to the west and south west. The baseline setting is therefore already partially compromised with modern intrusion, specifically from the pylon which appears behind **SM11947** from **SM11950** (**Figure 11.11b**), thus reducing the setting's sensitivity to change.

Proposed Development Effects

11.192 The ZTV, presented in **Figure 11.3**, indicates four wind turbines would be visible in views to the south east from the cairn in a bare earth scenario. The nearest of which, T1, would be approximately 1.5km from the cairn.

11.193 The photomontage from the cairn, presented in **Figure 11.10**, indicates that the Proposed Development would feature prominently in views to the south west. In a bare earth scenario (Figure 11.10g) this would include the four wind turbines, the met mast, the solar array and the substation compound. However, due to the intervening topography and vegetation, only the turbines and met mast are likely visible (**Figure 11.10h**). Views of the met mast would be restricted due to its placement behind T2. As mentioned, views from the cairn are considered to be of less importance to its cultural significance, however, the turbines would be at such a scale and distance that there would be a discernible distraction when at the cairn, viewing the surrounding landscape to understand, appreciate, and experience its placement.

11.194 These visible turbines would be directly in views both from the associated **SM11950** (**Figure 11.11)** and on the approach from Kirtle Water represented by the location in **Figure 11.9**. When viewing the cairn from this point and from **SM11950** the viewer's eye would be drawn to the proposed wind turbines and diminish the prominence of the cairn on the horizon. While there is modern intrusion already in the setting of the cairn which reduces its sensitivity to change, the addition of the wind turbines would be at a much greater scale than the existing pylon. Thus, despite the reduced sensitivity, the wind turbines would still present distinct adverse change. The relative prominence of the cairn

above the Solway Plain is considered to be key to understanding, experiencing, and appreciating the placement and connection to **SM11950**. Therefore, impacts on this view adversely impact the setting of the cairn, to a clearly discernible extent.

11.195 The other elements which compose the cultural significance of the heritage asset - the intrinsic characteristics, relationships to the Kirtle Water and other cairns to the north west and north east - would be largely unaffected from the Proposed Development. In reciprocal views from other cairns, the Proposed Development would be no more than a minor distraction in views towards the cairn as it would not directly backdrop these views, excepting **SM11950**. These would not be anticipated to impact the ability to understand, appreciate, and experience, as it is assessed that the more important contributing views are those that are more localised.

11.196 Two key contributing aspects of the asset's setting would be impacted reducing the ability to appreciate, understand, and experience in views from the cairn, its and relationship to **SM11950**, which contribute to its cultural significance. All other aspects of the asset's setting would remain unimpacted or negligibly affected by the Proposed Development. As such, it is assessed the cultural significance of the asset would be eroded to a clearly discernible extent.

11.197 As the main contributor to the cultural significance would be impacted – the visual relationship between **SM11950** and the cairn - it is considered the magnitude of change as a result of the Proposed Development would be Medium Adverse, which would result in a **Moderate** significance of effect. This is considered significant in EIA terms.

11.198 When considering the integrity of its setting, the underlying topography that informed the siting of the cairn has not changed and the relationship between the two cairns and the Kirtle Valley remains despite clear distraction. This ability to understand, appreciation, and experience these relationships are adequately retained and as such, when viewed within the context of NPF4 Policy 7 (h), the integrity of setting is retained.

Calvertsholm Cottages, cairn 320m NNW of (SM11950)

Description

11.199 This asset comprises a burial cairn, dated to the early Bronze Age. It is visible as a turf covered mound, measuring 11m. In 1908, it was excavated to reveal a central cist which contained the remains of at least one adult and a child. Its original size was recorded at 50ft (16m) in diameter. Since its excavation, very little additional remains survive, and it is mostly identifiable due to its exclusion from the cultivated agricultural field it lies in.

11.200 The intrinsic characteristics of the asset contribute to its cultural significance, both in as individual cairn, and in its group value where they have the potential to further our understanding of the construction and placement of Bronze Age burial monuments, as well as our understanding of the wider Bronze Age activity in southwest Scotland.

Contribution of Setting to Cultural Significance

11.201 Burial cairns were constructed as places for Bronze Age people to place their dead and were typically located according to specific landscape and contextual characteristics. They were often placed in proximity to watercourses, and other contemporary monuments typically of funerary or ceremonial significance. As visible monuments they were likely built to be appreciated on approach and as a part of a wider prehistoric landscape.

11.202 The cairn is situated at 20m AOD in the flood plain of Kirtle Water, located approximately 0.16km to the north at its closest point. From its position, the ground slopes downward toward the Kirtle Water and gently upwards to the southeast and east. Despite its low-lying position, the flat landscape of the Solway Plain allows for moderately distanced views to the north, east and south east. The low ridge line in the south east blocks any further views in this direction. **SM11947** sits on the top of this rise and is sky-lined on the horizon. From this perspective, it is the nearest prominent topographical feature to the cairn. Given the low-lying nature of the cairn, it is unlikely that views towards the cairn were particularly important unless immediately nearby on approach. Similarly, while it has moderately distanced views, this is owing to the flat landscape rather than any topographical advantage. Instead, views towards, along, and on approach from Kinnel Water in the north are more important views help to understand the placement of these Bronze Age cairns.

11.203 There are a number of contemporary monuments nearby, the most notable being the aforementioned **SM11947**, which possesses similar characteristics. The Kirtle Water, running north west and south west, would have been a natural focal point for these burial monuments evidenced by multiple similar cairns along its length, such as Robgill Mains, cairn (**SM11987**) and Blackyett, cairn (**SM11951**) to the north east. While these are not visible from the cairn, they evidence the similarity and importance of the Kirtle Water to the placement of these types of burial monuments. Other nearby cairns, such as Mossknowe (NHRE 66974) approximately 320 m to the north west, and Mossknowe (NHRE 66973) approximately 600m to the north east are other examples of excavated burial cairns, which have revealed internal cists and grave goods. These cairns have group value which is derived from their type and proximity to each other. While many of the cairns composing this group have been destroyed or are no longer prominent, visibility of these cairns as one travels along the routeway of the Kirtle Water would have been key to the experience, appreciation, and understanding of their placement. For this reason and the visual links that survive, views towards and from the Kirtle Water are considered to be key to the cultural significance of Calvertsholm Cottage, cairn (**SM11950**).

11.204 The asset's current setting is rural in nature. The cairn sits within a cultivated field with **SM11947** and its views compose more agricultural fields bounded by modern drains, and scattered agricultural outbuildings. There are a number of other modern elements nearby, including an overhead power transmission line, wooden telegraph poles, and radio transmitter mast. The pylons appear directly behind **SM11947** on the horizon (see **Figure 11.9b.** Wind turbines are visible distantly on the horizon, the nearest being Beck Burn Wind Farm approximately 5.8km away to the east. The cairn is less than 10m from a C-road and modern farm buildings are approximately 300m to the south east of the cairn. The baseline setting is therefore already partially compromised with modern intrusion, specifically from the pylon which appears behind **SM11947** from **SM11950** (**Figure 11.9b (CH3**), thus reducing the setting's sensitivity to change.

Proposed Development Effects

11.205 The ZTV, presented in **Figure 11.3**, indicates that four wind turbines would be visible in views to the south east from the cairn in a bare earth scenario. The nearest of which, T1, would be 1.7 km from the cairn.

11.206 The photowires and photomontages, presented in **Figure 11.9 (CH3) and Figure 11.11 (CH5)**, indicate that the four wind turbines would feature prominently in views to the south west, with the met mast obscured from view by T2. While partially blocked by the low ridgeline, these turbines would be directly in views towards **SM19947** and on the

approach from Kirtle Water represented by the location in **Figure 11.9 (CH3)**. When viewing the cairn from this point and from **SM11950** in the wirelines the viewer's eye would be drawn to the proposed wind turbines and diminish the prominence of the cairn on the horizon.

11.207 While there is modern intrusion already in the setting of the cairn which reduces its sensitivity to change, the addition of the turbines would be at a much greater scale than the existing pylon. Thus, despite the reduced sensitivity, the wind turbines would still present distinct adverse change and affect the prominence of **SM11947** on the horizon. The relative prominence of the cairn so near to **SM11950** is considered to be key to understanding, experiencing, and appreciating the placement and connection to **SM11950**. Therefore impacts on this view adversely impact the setting of the cairn, to a clearly discernible extent.

11.208 The other elements which compose the cultural significance of the heritage asset - the intrinsic characteristics, relationships to the Kirtle Water and other cairns to the north west and north east - would be largely unaffected from the Proposed Development. Due to the low lying nature, it is unlikely the cairn was intended to be viewed from a distance, and as such, no reciprocal views from other cairns, with the exception of **SM11947**. Views from **SM11947** are considered key to understanding the placement of SM11947 and would be unaffected by the Proposed Development as there would be no visibility.

11.209 Two key contributing aspects of the asset's cultural significance would be impacted by the Proposed Development reducing the ability to appreciate, understand, and experience the cairn's its approach and its relationship to **SM11950**. The latter is considered to be a main contributor the cultural significance of the cairn, based on its topographical position. As such, the cultural significance of the asset would be eroded to a clearly discernible extent.

11.210 As a monument of high cultural significance, the magnitude of change as a result of the Proposed Development would be Medium Adverse, which would result in a **Moderate** significance of effect. This is considered significant in EIA terms.

11.211 The underlying topography that informed the siting of the cairn has not changed. The relationship between the two cairns and the Kirtle Valley remains despite significant distraction in the views from the valley and **SM11950**. This ability to understand, appreciation, and experience these relationships are adequately retained and as such, when viewed within the context of NPF4 Policy 7 (h), the integrity of setting is retained.

Blackyett, cairn 224m E of (SM11951)

Description

11.212 The asset is a burial cairn, likely dating to the Bronze Age. The cairn is approximately 35m in diameter and 5m in height, with the top of the cairn having been flattened at some point for a building that is no longer extant. The asset is abutted to the south by post-medieval agricultural earthworks. The asset derives its significance in part from its intrinsic characteristics, with further investigation of the asset having the potential to further our understanding of Bronze Age burial practices, the communities that lived in the area, and potentially the wider Bronze Age society. Furthermore, the cairn would have preserved an earlier land surface, and this would help understand environmental conditions at the time of its construction.

Contribution of Setting to Cultural Significance

11.213 The asset also derives its cultural significance in part from its setting. Cairns are most often found along key routeways through the landscape, including along the lines of watercourses and their valleys. In the case of Blackyett, cairn (**SM11951**), the cairn is found along the southern banks of Kirtle Water, a river which empties into the Solway Firth approximately 8km to the south east. The placement of the burial asset along the watercourse may have had ritualistic significance to those constructing it, with strong connections between water and the afterlife having persisted throughout Scottish mythology and traditions. Additionally, burial cairns may have had a dual purpose, both as funerary monuments and as markers within the landscape, identifying key sites, land boundaries or routeways. As such, the asset's placement along Kirtle Water may have been important to those moving through the landscape, both spiritually and functionally, with views to and from the asset along the river being of significance.

11.214 The listing description notes that the majority of similar assets in the area are located on south-facing slopes, overlooking the Solway Firth. Whilst the land does, in general, slope down towards the Solway Firth, the land slopes upwards slightly in the immediate vicinity of the asset, and as such, long-distance views all the way to the Firth would not have been possible. This indicates that more localised views to and from the asset are of importance, and, when closer to the asset, the asset's prominence (at least 5m above the adjacent topography) would have meant that the cairn would have been prominent only when approaching from within the immediate landscape.

11.215 The asset also sits within a wider prehistoric landscape, with evidence of Bronze Age funerary practices along the line of Kirtle Water. The closest Bronze Age funerary asset is Robgill Mains, cairn (**SM11987**), located approximately 0.5km to the west of the asset, and the two Calvertsholm Cottages cairns (**SM11947**, **SM11950**), located approximately 3.3km to the south east. All these cairns are located along the path of the river and, as such, share an important aspect of their setting. Intervisibility between these cairns would likely have been of importance, forming a funerary landscape along the banks of the river. Due to the topography (as shown in **Figure 11.14**, only Robgill Mains, cairn (**SM11987**) is visible from the asset; as such, views towards and from this cairn would have been of importance to the siting of the cairn.

Proposed Development Effects

11.216 The ZTV (**Figure 11.3**) indicates that all four wind turbines would be visible from the asset, with **Figure 11.14b** showing that four wind turbine tips and a single wind turbine hub would be visible from the asset. The closest wind turbine would be T4, approximately 3.4km to the south east.

11.217 The wind turbines would not be present in direct views to the south east or north west along Kirtle Water and would not be present when approaching the asset along the river and from within the immediate landscape. They would also not be present within views from the asset towards Robgill Mains cairn (**SM11987**). As such, the Proposed Development would not impact the ability to understand, appreciate and experience the asset's connection to the watercourse, the asset's intended visibility when approaching through the landscape, nor its connection to nearby assets.

11.218 The Proposed Development would be present in one outward view from the cairn, specifically in views to the south west. The presence of the wind turbines along the horizon in these views may form a distraction to the ability to understand, appreciate, and

experience the asset's connection to the local landscape and more distantly in the direction of the Calvertsholm Cottage cairns (**SM11947, SM11950**); however, this distraction would only be to a very minor extent.

11.219 As the asset is of high cultural significance and the Proposed Development would impact a single aspect of the asset's setting, the magnitude of change would be Very Low Adverse. This would result in a **Very Minor** significance of effect, which is considered **not significant** in EIA terms.

Robgill Mains, Cairn 320m E of (SM11987)

Description

11.220 This asset is a burial cairn, dated to the Bronze Age. It is visible as a low, grass-covered mound, composed of stones. The cairn measures 29m in diameter and 3.5m in height and has been unexcavated, providing a good example of a well-preserved burial cairn. As an unexcavated cairn, the asset derives its significance in part from its intrinsic characteristics, with further investigation of the asset having the potential to further our understanding of Bronze Age burial practices, the communities that lived in the area, and potentially about the wider Bronze Age society.

Contribution of Setting to Cultural Significance

11.221 Burial cairns were constructed as places for Bronze Age people to place their dead and were typically located according to specific landscape and contextual characteristics. Generally, cairns of this type were often placed in proximity to watercourses, and other contemporary monuments, typically of funerary or ceremonial significance. In this case, the asset is placed approximately 340m south of Kirtle Water on a the high point of a slightly domed hill, and within a larger known group of Bronze Age burial cairns placed along the Kirtle Water. Other cairns within this group are Blackyett, cairn (**SM11951**), the Calvertsholm Cottage cairns (**SM11947**, **SM11950)** and several other non-designated cairns to the south east. All these cairns are located along the path of the river and as such, share an important aspect of their setting. Intervisibility between these cairns would have been of importance, forming a funerary landscape along the banks of the river. The nearest of these Blackyett, cairn (**SM11951**), is located approximately 500m to the south east. Its proximity and reciprocal visibility suggests an intentional relationship which, in turn, forms an important aspect of its setting.

11.222 The views afforded by the cairn's location on the hill are expansive and its placement atop a high point in the landscape suggests an intentional utilisation of the topography both in order for views towards known aspects of importance for the cairn, such as Kirtle Water, and for the cairn to be seen from other contemporary monuments. From the cairn, these key views would be towards the Kirtle Water, Blackyett, cairn (**SM11951**) and generally south east where the other cairns are situated. Views from the Kirtle Water, Blackyett, cairn (**SM11951**) are also considered key views.

11.223 The asset's current setting is rural in nature. The cairn sits within a cultivated field and its views compose more agricultural fields and scattered agricultural outbuildings. There are a number of other modern elements nearby, including a wooden transmission line approximately 100m to the east, a B-road 140m to the east and south east, and modern farm buildings are approximately 300m to the south east and north west of the cairn. Wind turbines are visible distantly on the horizon, the nearest being Beck Burn Wind Farm approximately 8.8km away to the east. Planted field boundaries screen much of the

original topography. The baseline setting is therefore already partially compromised with modern intrusion.

Proposed Development Effects

11.224 The ZTV, presented in **Figure 11.3**, indicates that four wind turbines would be visible in views to the south east from the cairn in a bare earth scenario. The nearest of which, T4, would be approximately 3.5km from the cairn.

11.225 The wireline, presented in **Figure 11.16b** indicates that the Proposed Development, comprising the wind turbines, met mast and solar array, would feature prominently in views to the south, south east. Given the topography, the entirety of the wind turbines and met mast would be visible. Neither of these elements would directly interfere in views along the Kirtle Water to the east, south east and north east nor towards the other cairns in the group to the south east, as they would be on the periphery of these views. Still, their presence would be a distraction to these relationships to an overall very minor extent. The views between Blackyett, cairn (**SM11951**) and the asset would not be affected and the ability to understand, appreciate, and experience this relationship would be retained without impact.

11.226 Two aspects of the asset's setting would be impacted reducing the ability to appreciate, understand, and experience the cairn's relationship to the Kirtle Water valley and the cairns along it. Given the approximately 4km distance to Calvertsholm Cottage, cairn (**SM11947**), it is unlikely that the visual relationship would have been of significance, rather, it is the associative relationship that contributes more to the significance of the assets. On balance, the cultural significance of the asset would be eroded to a very minor extent.

11.227 As a monument of high cultural significance, the magnitude of change as a result of the Proposed Development would be Very Low Adverse, which would result in a **Very Minor** significance of effect. This is considered **not significant** in EIA terms.

Calvertsholm, settlement 110m N of (SM12128)

11.228 The asset comprises the remains of an enclosed settlement and associated droveway, dating to the Iron Age, potentially coinciding with the Roman occupation of the Solway Firth area. The enclosure measures 90m north to south, by 120m east to west and survives above ground as a small amount of low earthworks. The extent of the asset can only be seen as cropmarks. An entrance is evident in the northeast, with up to five circular enclosures or hut circles are located inside the settlement. The droveway, a road for transporting cattle, runs on a west-north west to east-south east axis for at least 0.5km and appears to run to, or from, the settlement.

11.229 The settlement derives its significance in part from its intrinsic characteristics. The asset is a good example of a univallate enclosed settlement and associated droveway, and whilst the above-ground remains have been mostly removed, cropmarks indicate good below-ground survival. The asset has the potential to further our understanding of Iron Age society, domestic life, architectural techniques and livestock management practices. Furthermore, it may provide insight into how local populations interacted with the Roman occupiers.

Contribution of Setting to Significance

11.230 The asset is placed within an area of relatively flat ground, approximately 0.3km south of Kirtle Water, a river that runs northwest to southeast before entering the Solway Firth approximately 4.6km south east of the asset. The area surrounding the asset is classified as able to support mixed agriculture, meaning it is fertile for crops and can sustain livestock grazing (Scotland's Soils, 2025). As such, the asset is well placed for agricultural purposes, and the inhabitants appear to have at least utilised the surrounding landscape for grazing, as evidenced by the associated droveway.

11.231 The listing description notes that "*given the site's location, it seems likely that people designed the ditches to enclose or exclude stock, or define the area of settlement, rather than to provide defence",* and as such, the wide-ranging views due to the flat surrounding landscape are unlikely to have been utilised for defensive reasons. However, the flat ground would have enabled inhabitants to monitor livestock.

11.232 The asset is placed inland from the Solway Firth, along the Solway Plain, providing a key route into the heart of mainland Britain. As the flat land to the north of the firth, the Solway Plain appears to have been a key access route for those travelling further north into Scotland, as well as those needing to access the Irish Sea. The Kirtle Water, which runs into the Solway Firth, provides a route through the landscape and connects the hills to the north with the firth to the south. The asset's placement near the Kirtle Water, approximately 0.3km to the north was likely intentional, in response to the movements of people through this part of the landscape and any key trade routes.

11.233 The asset is located within a wider landscape of later prehistoric enclosed agricultural settlements, all with their own associated drove roads and potential field systems. The nearest are **SM11994** and **SM11995** approximately 1.9km and 2.9km to the east. approximately 2.9km to the south east and 3km to the south west are a further two settlements of this type (**SM12029** – **SLR12**, and **SM12086**). Any intervisibility between these assets may not have been intended for any practical purpose, such as to provide a defensive network. However, the placement of the asset within a prehistoric landscape does contribute to our ability to understand the economic movement during this period, as well as the spatial distribution of settlements within this key area of the landscape.

11.234 Furthermore, the asset is adjacent to two burial cairns, likely early Bronze Age in date, located approximately 0.15km to the west and approximately 0.18km to the north west. These cairns (**SM11947** and **SM11950**) are much earlier in date than the late Iron Age settlement; however, cropmarks have revealed that the location of the droveroad appears to bend to avoid **SM11947**, indicating some degree of understanding or acknowledgement for the earlier monuments. While the cairns predate the settlement, they are visible from the asset, and this visibility may have informed the placement of the settlement. As such, the visual connection between the asset and the cairns is of importance.

11.235 The asset's current setting comprises its placement within agricultural fields, bordered by established hedgerows. A large farmstead is located directly to the southeast, obscuring views in this direction, including views towards the Solway Firth. Due to the field boundaries to the east of the asset, views towards Kirtle Water are obscured, but in their absence, these views would be open and long-ranging. The same can be said for views towards the earlier cairns, which are currently obscured in part by the surrounding hedgerows, but in their absence, views would be possible. In views to the south west, there are two overhead lines visible and the associated wooden poles and electrical overhead line towers are prominent and present. As such, the modern contributions to the

asset's setting, namely the overhead lines and the farmstead to the south, restrict the ability to understand, appreciate, and experience the asset's setting, acting as modern distractions, and as such, the asset's setting is of a reduced sensitivity to further change.

Proposed Development Effects

11.236 The ZTV (**Figure 11.3** and **Figure 11.13)** indicates that all four wind turbines and the met mast would be visible. The nearest wind turbine, T1, would be approximately 1.6km to the south west.

11.237 Whilst visible from the asset, to the southwest, the Proposed Development would not be anticipated to impact the ability to understand, appreciate, and experience the agricultural placement of the asset, nor the asset's placement to be able to monitor the surrounding agricultural land. The asset is still situated within agricultural fields, and the introduction of turbines into the views of the surrounding fields, in addition to the already extant overhead lines and agricultural buildings, would not further the impact upon this aspect of its setting.

11.238 The ability to understand, appreciate and experience the asset's proximity to the Solway Firth and along the Solway Plain is already greatly reduced due to the adjacent farmstead. The farm buildings screen outward views towards the firth, and any contribution of the asset's setting to the ability to understand, appreciate and experience the asset's placement along this key inland routeway is diminished. The introduction of four turbines in views to the southwest would not further impact this aspect of the asset's setting.

11.239 The ability to appreciate and experience the asset's connection to Kirtle Water, which provides a key inland route from the Solway Firth, would likely be subjected to a very minor distraction when approaching the asset from the watercourse. The wind turbines and met mast would feature in views when approaching from the northeast, and would likely draw the eye away from the location of the asset due to their proximity and size on the flat landscape. The ability to understand the asset's location would be retained, but the ability to experience and appreciate the asset's placement here would be impacted to a very minor extent. Views from the asset towards Kirtle Water would be unimpacted as the development would be located to the rear of the viewer.

11.240 **Figure 11.13b** and **Figure 11.13c** demonstrates the view from the asset towards the earlier cairns, around which the droveway was routed. The turbines would not be visible in direct views towards these assets, as they are placed to the south west outwith the direct viewshed the Proposed Development would not impact on the ability to understand, appreciate, and experience the asset's relationship to these cairns and the connection to the earlier monuments.

11.241 The Proposed Development would, therefore, introduce a distraction to a single aspect of the asset's setting, its connection to the Kirtle Water. However, despite there being a distraction, this would be only to a very minor extent at worst, and the ability to understand, appreciate and experience these aspects of their setting would remain. All other aspects of the asset's setting would be retained.

11.242 The asset is of high cultural significance. As such, the Proposed Development would result in a Very Low Adverse magnitude of change upon the asset's setting which provides a **Very Minor** significance of effect. This is considered **not significant** in EIA terms.

The Bracken, enclosed settlement and droveway 3280m WSW of (SM11994)

Description

11.243 The asset comprises an enclosed settlement and droveway, likely Iron Age in date. The settlement measures 55m north east to south west and 42m transversely and is enclosed by two earth and stone banks, interspaced with a ditch. There are two entrances, one in the east-south east and one in the west-north west. A droveway extends from the west-north west entrance for approximately 70m, identified by two parallel cropmarks. Furthermore, investigations surrounding the site identified archaeological features dating to the Neolithic period and the Bronze Age, demonstrating multi-period settlement on the Site.

11.244 The settlement derives its significance in part from its intrinsic characteristics. The asset is a good example of a bivallate enclosed settlement and associated droveway, with some surviving and distinctive above-ground remains. The asset has the potential to contain Iron Age buried archaeological remains, as well as those from the earlier periods, as outlined above. As such, the asset has the potential to further our understanding of Iron Age society, domestic life, architectural techniques and livestock management practices, as well as our understanding of earlier settlement patterns within the area.

Contribution of Setting to Significance

11.245 The asset is situated on a small ridge (30m AOD), within a relatively flat landscape. The landscape slopes gently downwards to the south west, where it meets Kirtle Water, approximately 1km to the south west. The area surrounding the asset is classified as able to support mixed agriculture, meaning it is fertile for crops and can sustain livestock grazing[12]. As such, the asset is well placed for agricultural purposes and appears to have at least utilised the surrounding landscape for grazing, as evidenced by the associated droveway.

11.246 The asset's position on the small ridge provides a slightly elevated position over the surrounding landscape. The elevation may indicate defensive positioning, enabling the inhabitants to monitor the surrounding landscape. It may also have allowed inhabitants to monitor their land and livestock from within the enclosed settlement.

11.247 The settlement has extensive views southwards towards the Solway Firth and may have played a part in controlling or monitoring access through the landscape. Due to its size and placement on the ridge, the asset would have been prominent within the landscape, and as such, views and approaches to and from the asset were likely of importance to its placement, allowing the asset to maintain a form of visual control over those moving through the landscape.

11.248 The asset is placed inland from the Solway Firth, with views across the Solway Plain. The Solway Firth provides access inland from the Irish Sea, providing a key route into the heart of mainland Britain. As the flat land to the north of the firth, the Solway Plain would have been a key access route for those travelling further north into Scotland, as well as those needing to access the sea. Kirtle Water, which runs into the Solway Firth, provides

[12] Scottish Government (2025) Soil Map of Scotland. Available at: https://map.environment.gov.scot/Soil_maps/?layer=5

a natural route through the plain and connects the hills to the north with the firth to the south. The asset's placement along Kirtle Water and on the Solway Plain was likely intentional, in response to the movements of people through this part of the landscape and any key trade routes.

11.249 The asset is situated within a wider landscape of prehistoric enclosed agricultural settlements, all with their own associated droveways and potential field systems. The closest recorded asset of this type, Whinnyrig (**SM11995)**, is located approximately 1km to the north east. The asset is also located approximately 2km east of Calvertsholm settlement (**SM12128)**, which is located on the western banks of Kirtle Water. In addition, Woodfield enclosed settlement and droveway (**SM12029**) is located approximately 4.3km to the south west, and Redkirkmill enclosed settlement (**SM12086**) is located approximately 2.1km south of the asset, along the western bank of the Kirtle Water. Of these assets, only **SM12128** and **SM11995** were likely visible, due to the intervening topography. Intervisibility between these assets may not have been intended for any practical purpose, such as to provide a defensive network; however, the elevation of the asset indicates that it would have had visibility of the assets located on lower ground. An understanding of their spatial distribution allows us to further our understanding of economic movement within this period.

11.250 The asset's current setting comprises its placement within an enclosed agricultural field, surrounded by agricultural fields to the south and west. The A74 (M), a major route, runs immediately to the north of the asset, with the slipway from Gretna Services running along the northern border of the field. Gretna Services is located to the east. These modern aspects of the landscape are intrusive and contribute negatively to the asset's setting, with the noise and presence of the motorway causing a clear distraction to the ability to experience and appreciate the asset's setting, drawing the eye towards the motorway instead of towards the wider landscape.

11.251 Furthermore, the motorway and related infrastructure obscure views northeastwards towards and from **SM11995**. Both the road and the Gretna Services are large modern intrusions within the landscape; however, the rest of the surrounding landscape does not contain visible intensive settlement. Instead, the landscape contains scattered farmsteads, with some intrusive elements of modern infrastructure such as 5G towers and overhead lines. These additional elements of the landscape, whilst present, do not distract from the ability to understand, experience and appreciate the assets' placement along the key routeway of the Kirtle Water, overlooking the Solway Plain.

11.252 As the asset's setting has already been impacted by the presence of the A74 (M) and the Gretna Services, the asset's sensitivity of setting is considered to be reduced. On balance, the asset's intrinsic characteristics as outlined above provide a greater contribution to the asset's significance than its setting.

Proposed Development Effects

11.253 The ZTV (**Figure 11.3**) indicates that four wind turbines would be present in views to the south west, with **Figure 11.18** demonstrating that all four wind turbines would be visible, as well as the met mast. In a bare earth scenario, the proposed solar array and substation are likely to be visible. The closest wind turbine would be T1, located approximately 3.4km south west.

11.254 The wind turbines would feature prominently in views to the west south west and would be the largest modern intrusions within this aspect of the landscape (**Figure 11.18e**). They

would only be peripheral when looking southwards, thus the appreciation of the asset's placement near the Kirtle Water and this portion of the Solway Plain would remain intact and unimpacted. The turbines would only be directly prominent in southwestern views. As such, the wind turbines would draw the eye away from these views across the Solway Plain and the Kirtle Water and distract from the ability to understand, appreciate, and experience this aspect of its setting. Given the retention of the other views to the south and south east, this distraction is only anticipated to a very minor extent.

11.255 Whilst views towards the north are impacted by the placement of the A74 (M), and associated infrastructure, and as such views towards **SM11995** are no longer evident. Views towards **SM12128**, to the west, are still intact, although restricted due to the nature of the asset being reduced to only a cropmark. The introduction of wind turbines and met mast to the south west of the asset would appear on the periphery of these views and have the potential to draw the eye away from the location of the contemporary settlement and distract the viewer from the ability to understand, appreciate and experience their spatial connection (**Figure 11.18b**). As these are not directly behind the asset and there remains some distance between where the wind turbines appear and where the settlement is, this is anticipated to distract only to a very minor extent.

11.256 The localised views associated with the asset's agricultural use of the landscape would not be impacted, as the turbines are distanced from the immediate landscape. The fields preserved to the south of the asset would continue to enable the viewer to understand the agricultural connection, albeit with the clear and present distraction of the A74(M) to the rear.

11.257 The Proposed Development would, therefore, introduce a distraction to two aspects of the asset's setting: its connection to contemporary settlement **SM12128**, and its position near Kirtle Water and overlooking the Solway Firth and Solway Plain. However, as mentioned, these are only in specific views over the entire views afforded over the Solway Plain and Kirtle Water, thus, despite there being a distraction, overall the introduction of wind turbines would distract to a minor extent at worst, and the ability to understand, appreciate and experience these aspects of the setting would remain.

11.258 The asset is of high cultural significance. As such, the Proposed Development would result in a Very Low Adverse magnitude of change upon the asset's setting which provides a **Very Minor** significance of effect. This is considered **not significant** in EIA terms.

Robgill Tower, fort 90m NW of (SM12157)

Description

11.259 The asset comprises a promontory fort dating to the Iron Age. The asset is univallate, with a single curving rampart surviving, as well as a ditch and counterscarp. These defences earthworks enclose a promontory, measuring 120m north to south and 75m transversely and with an entrance located on the north eastern edge. The asset later formed part of the designed policies of Robgill Tower (LB3789), and as such, the asset is well preserved and located within an area of Ancient Woodland. Due to its high level of preservation, the asset derives its significance in part from its intrinsic characteristics. Subsurface remains of the asset have the potential to enhance our understanding of Iron Age construction techniques, as well as our understanding of Iron Age domestic and defensive activity.

Contribution of Setting to Cultural Significance

11.260 The asset is bounded on the north east by Kirtle Water and on the south by Robgill Scarp, with the land in between forming a promontory. Whilst the asset is defended by earthworks along the western edge, the watercourse surrounding the landform provides natural defences to the north, south, and east. The asset's placement is therefore intended to be defensive in nature, utilising both natural defences and earthworks to protect inhabitants.

11.261 The area surrounding Kirtle Water, and the Solway Plain in general, was likely a key routeway through the landscape during the Iron Age period. Kirtle Water enters the Solway Firth approximately 8.5km southeast of the asset. The Solway Firth is a key route into mainland Britain from the Irish Sea, providing a key trading route between Britain and Ireland and communities along the western coast. As such, the placement of the asset along the natural routeway inland was likely of significance, potentially controlling access along a key part of the Solway Plain and any important communication or trading routes.

11.262 Unlike the majority of Iron Age forts, the asset is not placed at a significantly elevated position. The land surrounding the asset is relatively flat, before rising slightly in all directions, and as such, long-distance views are not possible. As such, it can be surmised that the asset was not intended to be viewed from a distance nor to monitor long-distance aspects of the landscape. Instead, the asset appears to have focused on monitoring access along the immediate section of Kirtle Water and controlling the immediate surrounding landscape. As such, long-distance views from the asset would not contribute to the asset's significance, nor would long-distance views towards the asset. However, more localised views would be of importance and the ability to monitor approaches both along the watercourse and from within the local landscape would have informed the asset's placement.

11.263 The asset forms part of a larger group of Iron Age enclosed settlements along the path of Kirtle Water and the general Solway Plain area. Spatial analysis of these assets would further our understanding of Iron Age settlement patterns in the area, as well as our understanding of interactions in Iron Age society. Whilst the asset is located in proximity to multiple settlements (e.g., **SM4087** located approximately 2.4km to the south and **SM12128** located approximately 4.3km to the south east), the immediate landscape means that views between these assets are not possible, nor, in this case, were they intended. Furthermore, the asset sits within a landscape of Roman occupation, which coincided with the later Iron Age. The closest asset of Roman date is the Birrens complex of Roman camps and forts (**SM666**, **SM2613**, **SM2746**) located approximately 4km to the north west. Whilst the proximity of these assets enables us to understand more about interactions between the incoming Roman population and the established Iron Age population, the surrounding topography means that views between the assets would not have been possible.

Proposed Development Effects

11.264 The ZTV (**Figure 11.3**) indicates that up to four wind turbines would be visible from the asset, with three and four wind turbines visible from the northern-most and western-most extents respectively, no wind turbines visible from the south and south east of the asset, and one wind turbine visible from the asset's centre. The closest turbine would be T4, located approximately 4km to the south east.

11.265 In views from the asset, shown in **Figure 11.15b**, the proposed wind turbines would be peripheral at most and appear only minimally above the horizon in views south east along Kirtle Water, looking south east and would not be visible in views to the north west. The defensive placement of the asset, and its ability to understand its ability to monitor approaches through the immediate landscape, would remain unimpacted. Similarly, on approach from the north along the Kirtle Water, the visible turbines would appear only peripherally and minimal above the horizon.

11.266 The only aspect of the asset's setting that has the potential to be impacted by the Proposed Development is views of along the Kirtle Water and from the approach in the north, where the ability to understand, appreciate, and experience the assets ability to monitor approaches from the direction of the development would be subject to a very minor distraction at most. As outlined, long-distance views are not the focus of the fort, and the ability to monitor approaches through the immediate surrounding landscape would not be impacted due to the turbines' placement outwith the local landscape.

11.267 As such, there are two aspects of the asset's setting that are anticipated to be impacted by the Proposed Development to a very minor extent, and thus, the magnitude of change would be Very Low Adverse. The significance of effect would be **Very Minor**, which is considered **not significant** in EIA terms.

Table 10-8: Summary of Operational Effects

Cultural Heritage Asset	Cultural Heritage Significance	Magnitude of Change	Significance of Effect	Significant in EIA Terms	NPF4 Compliant
Category A Mossknowe House (LB9799)	High	Low Adverse	Minor Adverse	No	Yes
Category A listed Bonshaw Tower and House (LB3489)	High	Very Low Adverse	Very Minor Adverse	No	Yes
Category A listed Stapleton Tower (LB3782)	High	Medium Adverse	Moderate Adverse	Yes	Yes
Woodhouse Tower, tower house (SM12071)	High	Very Low Adverse	Very Minor Adverse	No	Yes
Frontiers of the Roman Empire: Hadrian's Wall (WHS)	Highest	Very Low Adverse	Minor Adverse	No	Yes
Calvertsholm Cottages, cairn	High	Medium Adverse	Moderate Adverse	Yes	Yes

Cultural Heritage Asset	Cultural Heritage Significance	Magnitude of Change	Significance of Effect	Significant in EIA Terms	NPF4 Compliant
315m WNW of (SM11947)					
Calvertsholm Cottages, cairn 320m NNW of (SM11950)	High	Medium Adverse	Moderate Adverse	Yes	Yes
Blackyett, cairn 224m E of (SM11951)	High	Very Low Adverse	Very Minor Adverse	No	Yes
Robgill Mains, Cairn 320m E of (SM11987)	High	Very Low Adverse	Very Minor Adverse	No	Yes
Calvertsholm, settlement 110m N of (SM12128)	High	Very Low Adverse	Very Minor Adverse	No	Yes
The Bracken, enclosed settlement and droveway 3280m WSW of (SM11994)	High	Very Low Adverse	Very Minor Adverse	No	Yes
Robgill Tower, fort 90m NW of (SM12157)	High	Very Low Adverse	Very Minor Adverse	No	Yes

Potential Cumulative Effects

11.268 The developments presented in **Table 11-9** are those considered for cumulative assessment as per the methodology presented in **Assessment Methodology**.

Table 11-9: Developments considered for Cumulative Assessment on Cultural Heritage Assets

Cumulative Development	Status	Number of Turbines (if applicable)
Bloch Wind Farm	Application	21
Callisterhall Wind Farm	Appeal	7

Construction Effects

11.269 There are no anticipated cumulative effects resulting from construction impacts from the Proposed Development. As such, the following assessment is based on the potential for

cumulative effects on the setting of cultural heritage assets arising from the operational stage of the Proposed Development. Only those heritage assets which have been assessed as experiencing a significance of effect of minor or above have been assessed for cumulative effects.

Operational Effects

Mossknowe House (LB9799)

11.270 Two Proposed Developments fall within the criteria to be included within the cumulative assessment Bloch Wind Farm is placed approximately 9.9km to the north east of the heritage asset at its closest point and Callisterhall Wind Farm is located 15km to the north at its closest point. According to the ZTV of Bloch Wind Farm (Bloch Wind Farm EIA Report, ECU00003463) and the cumulative wirelines, Mossknowe House (**LB9799**) would have no visibility of both Callisterhall Wind Farm and Bloch Wind Farm.

11.271 As such, when viewed cumulatively with Bloch Wind Farm and Callisterhall Wind Farm, the setting of Mossknowe House would not experience change from the Proposed Development to the point that it would increase the overall significance of effect beyond what is assessed in Section 11.5. The magnitude of change would remain Low Adverse, which would result in a **Minor** significance of effect. This is considered **not significant** in EIA terms.

Stapleton Tower (LB3782)

11.272 Two Proposed Developments fall within the criteria to be included within the cumulative assessment. Bloch Wind Farm is placed approximately 12.9km to the north east of the heritage asset at its closest point and Callisterhall Wind Farm is location approximately 14.5km to the north at its closest point. According to the ZTV of Bloch Wind Farm (Bloch Wind Farm EIA Report, ECU00003463) and the cumulative wirelines (Figure11.12, Stapleton Tower (**LB3782**) would have no visibility of these developments.

11.273 As such, when viewed cumulatively with Bloch Wind Farm and Callisterhall Wind Farm, the setting of Stapleton Tower (**LB3782**) would not experience change from the Proposed Development to the point that it would increase the overall significance of effect beyond what is assessed in Section 11.5. The magnitude of change would remain Medium Adverse, which would result in a **Moderate** significance of effect. This is considered **significant** in EIA terms

Frontiers of the Roman Empire: Hadrian's Wall (List Entry: 1000098)

11.274 There are no cumulative developments within 15km of this heritage asset. As such, the setting of Frontiers of the Roman Empire: Hadrian’s Wall (**List Entry: 1000098**) would not experience change from the Proposed Development to the point that it would increase the overall significance of effect beyond what is assessed in Section 11.5. The magnitude of change would remain Low Adverse, which would result in a **Minor** significance of effect. This is considered **not significant** in EIA terms

Calvertsholm Cottages, cairn 315m WNW of (SM11947)

11.275 Two Proposed Developments falls within the criteria to be included within the cumulative assessment for Calvertsholm Cottages, cairn 315m WNW of (**SM11947**); Bloch Windfarm,

which is placed c. 10.3km to the northeast of the cairn at its closest point and Callisterhall Wind Farm, which is 13.7km to the north of the cairn at its closest point.

11.276 According to the cumulative wireline (**Figure 11.10**), both wind farms would be visible in views to the north and north east of the heritage asset. As assessed in Section 11.5, long-distance views to the north east of the heritage asset are not considered to contribute to the cultural significance of the cairn, and the wind turbines would not be distinct enough against the skyline to distract from views towards Kirtle Water, a view which does contribute to the cultural significance of the cairn.

11.277 When viewed cumulatively with Bloch Wind Farm and Callisterhall Wind Farm, the Proposed Development would not be visible in the same views from the cairn, nor would these developments be anticipated to cause a perceivable change in setting due to distances and placement outwith the setting of the cairn. Therefore, the addition of these developments would not increase the perceptible change of the cairn's setting more than what was assessed in Section 11.5.

11.278 As such, when viewed cumulatively, the setting of Calvertsholm Cottages, cairn 315m WNW of (**SM11947**) would not experience change from the Proposed Development to the point that it would increase the overall significance of effect beyond what is assessed in Section 11.5. The magnitude of change would remain Medium Adverse, which would result in a **Moderate** significance of effect. This is considered **significant** in EIA terms.

Calvertsholm Cottages, cairn 320m NNW of (SM11950)

11.279 Two Proposed Developments falls within the criteria to be included within the cumulative assessment for Calvertsholm Cottages; Bloch Wind Farm, which is placed approximately 10.5km to the northeast of the cairn at its closest point and Callisterhall Wind Farm, which is placed approximately 13.5km to the north of the cairn at its closest point.

11.280 According to the cumulative wirelines (**Figure 11.11**), Bloch Wind Farm and Callisterhall Wind Farm would be visible in views to the north and north east of the heritage asset. As assessed in Section 11.5, long-distance views to the north and north east of the heritage asset are not considered to contribute to the cultural significance of the cairn, and the wind turbines would not be distinct enough against the skyline to distract from views towards Kirtle Water and **SM11947**, which do contribute to the cultural significance of the cairn.

11.281 When viewed cumulatively with Bloch Wind Farm and Callisterhall Wind Farm, the Proposed Development would not be visible in the same views from the cairn, nor would these developments be anticipated to cause a perceivable change in setting due to distances and placement outwith the setting of the cairn. Therefore, the addition of these developments would not increase the perceptible change of the cairn's setting more than what was assessed in Section 11.5.

11.282 As such, when viewed cumulatively, the setting of Calvertsholm Cottages, cairn 320m NNW of (**SM11950**) would not experience change from the Proposed Development to the point that it would increase the overall significance of effect beyond what is assessed in Section 11.5. The magnitude of change would remain Medium Adverse, which would result in a **Moderate** significance of effect. This is considered **significant** in EIA terms.

Further Survey Requirements, Mitigation and Monitoring

Mitigation

Construction

11.283 Where direct impacts on heritage assets have not been able to be avoided by design, mitigation is suggested. These suggestions are in line with NPF4 Policy 7 as well as Policy HE3 of the Dumfries and Galloway Local Development Plan (D&G Council, 2019), which states:

"a) The Council will support development that protects significant archaeological and historic assets, and the wider historic environment from adverse effects.

In considering development proposals the Council will need to be satisfied that:

- *the development preserves or enhances the appearance, fabric or setting of the site or asset in situ; and/or*
- *where there is uncertainty about the location, extent or significance of these assets an agreed scheme of assessment and evaluation to inform the application is included with the proposal; and/or*
- *due consideration has been given to the significance and value of the site or asset in relation to the long-term benefit and specific need for the development in the location proposed.*

b) Where, due to exceptional circumstances, development is to proceed and the preservation of historic assets in situ including buildings is not possible, a scheme of mitigation involving excavation, recording, analysis, publication and archiving and any other measures appropriate to the case has been agreed with the Council."

11.284 With reference to the identified construction impacts highlighted in **Table 11-7**, **Table 11-10** outlines the proposed mitigation for the assets that have potential for direct impacts as a result of the construction phase of the Proposed Development. All proposed mitigation would be subject to approval by Dumfries and Galloway Archaeology Service.

11.285 The highest potential for remains was highlighted to be where there is Class 1 and Class 5 peat present in the Site for paleoenvironmental remains (**See Figure 10.4**), namely in the northern and southern extents of the Site where the main access track, the solar array, and where crane pads for T1, T4, T3 of the Proposed Development would be sited. For the majority of the works, the impact would be less than investigative measures for paleoenvironmental remains such as test pitting or trenching, as such, no archaeological mitigation for paleoenvironmental remains has been recommended.

11.286 The potential for prehistoric remains is increased in the area of peat. It is recommended that a watching brief takes place during all ground breaking works which take place within areas of peat shown on **Figure 10.4: Peatland Classification**. This would be supplemented by a Site procedure toolbox talk and programme of recording.

Table 10-10: Proposed Mitigation for Potential Construction Impacts

Asset	Infrastructure	Proposed Mitigation
West Scales Farmstead (**SLR5**)	All Proposed Works and plant movements within 50m of the Farmstead	Demarcation and avoidance, Site procedure tool box talk/programme of awareness
Potential Paleoenvironmental Remains	All groundbreaking works	None
Potential Prehistoric Remains	All ground breaking works within areas of peat	Watching Brief, Site procedure toolbox talk, programme of recording

Operation

11.287 Embedded mitigation measures are outlined in **Chapter 2: Site Description and Design Evolution.**

Residual Effects

Construction

11.288 A summary of the residual effects of the Proposed Development, following implementation of the mitigation measures detailed above (**Table 11-10**) is presented in **Table 11-11** below.

11.289 Adverse direct impacts on archaeological remains would be offset to some degree by the positive effect that archaeological recording would have in respect to our understanding of the archaeological record, which will be of wider benefit to the archaeological and local community. Whilst the proposed mitigation would be a benefit of the Proposed Development, it would not offset the impact caused by the removal of assets due to proposed construction works. As such, after the implementation of the proposed mitigation, the residual effect upon the impacted assets would remain the same.

11.290 As noted previously, all mitigation would be agreed with Dumfries and Galloway Archaeology Service.

Operation

11.291 Residual operational impacts are summarised in **Table 11-11.**

Decommissioning

11.292 There would be no residual effects resulting from the decommissioning of the Proposed Development.

Statement of Significance

11.293 **Table 11-12** provides a summary of the likely effects resulting from the Proposed Development.

11.294 This assessment has considered data from a diverse range of sources in order to determine the presence of heritage assets which may be affected by the Proposed

Development. The potential direct, indirect, settings, and cumulative effects of the Proposed Development on the identified assets, mitigation measures for protecting known assets during construction or recording of currently unknown features which could be lost due to groundworks during construction, and the residual effects of the Proposed Development have also been assessed.

11.295 There is a single non-designated heritage asset within the Site (**SLR5**), however, it is not anticipated to experience impacts from any aspect of the Proposed Development. Mitigation in the form of demarcation and avoidance is still recommend to ensure to adverse impacts from construction activities.

11.296 There is potential for direct (physical) impacts during construction on unknown paelaeoenvironmental remains and unknown prehistoric period. The potential for encountering these remains are more likely in the areas of peat within the Site. In a worst case scenario where remains of medium significance are removed wholly, these effects would be significant in EIA terms. Significance of remains would be determined by the nature and extent of the remains identified, under professional judgement. Due to the nature of impacts resulting from the development of the solar array, complete removal of remains would be unlikely and no further mitigation is recommended as impacts would be minimal. A watching brief is recommended during groundbreaking works within areas of peat, with reference to **Figure 10.4: Peatland Classification**. A full scheme of mitigation should be agreed with Dumfries and Galloway Archaeology Service.

11.297 Of the assets listed in **Table 11-11**, a **Moderate** significance of effect has been identified due to changes within the setting of Stapleton Tower (**LB3782**), Calvertsholm Cottage, cairn 315m WNW of (**SM11947**), and Calvertsholm Cottage, cairn 320m NNW of (**SM11950**). These effects are considered to be significant in EIA terms. With regards to **SM11947** and **SM11950**, when viewed within the context of NPF4 Policy 7h) the integrity of setting is retained. With regards to **LB3782**, when viewed within the context of NPF4 Policy 7c), it is considered that the character, architectural interest and historic interest is preserved adequately.

11.298 When considered cumulatively with the surrounding relevant developments, the cumulative impact of the Proposed Development, all heritage assets considered would remain as assessed in **Operational Effects**, with no additional impacts found and no significant effects arising from cumulative developments.

11.299 Overall, the Proposed Development would be compliant with relevant policy and guidance, including the National Planning Framework 4 (NPF4) Policies 7(c) and 7(h), Historic Environment Policy for Scotland (HEPS), *UNESCO's '*Guidance and Toolkit for Impact Assessments in a World Heritage Context' (2022) and Dumfries and Galloway Local Development Plan 2 (2019) Policies HE1, HE3, and HE5.

Table 10-11: Summary of Effects

Asset	Type of Impact	Significance of Effect	Significant in EIA terms?	Mitigation	Means of Implementation	Residual Effect	Significant in EIA terms?
Construction Phase							
West Scales Farmstead (**SLR5**)	Direct (physical)	Nil	No	Avoidance	Demarcation, Site procedure tool box talk/programme of awareness	Nil	No
Potential Paleoenvironmental Remains	Direct (physical)	Moderate Adverse	Yes – only where complete removal of remains	None	N/A	Moderate Adverse	Yes
Potential Prehistoric Remains	Direct (physical)	Moderate Adverse	Yes – only where complete removal of remains	Watching Brief, Site procedure toolbox talk, programme of recording	Presence of a qualified archaeologist during groundbreaking works within areas of peat. Site procedure toolbox talk/programme of awareness.	Moderate Adverse	Yes
Operational Phase							
Mossknowe House (LB9799)	Direct (Setting)	Minor Adverse	No	N/A	N/A	Minor Adverse	No
Bonshaw Tower and House (LB3489)	Direct (Setting)	Very Minor Adverse	No	N/A	N/A	Very Minor Adverse	No

Asset	Type of Impact	Significance of Effect	Significant in EIA terms?	Mitigation	Means of Implementation	Residual Effect	Significant in EIA terms?
Stapleton Tower (LB3782)	Direct (Setting)	Moderate Adverse	Yes	N/A	N/A	Moderate Adverse	Yes
Woodhouse Tower, tower house (SM12071)	Direct (Setting)	Very Minor Adverse	No	N/A	N/A	Very Minor Adverse	No
Frontiers of the Roman Empire: Hadrian's Wall (WHS)	Direct (Setting)	Minor Adverse	No	N/A	N/A	Minor Adverse	No
Calvertsholm Cottages, cairn 315m WNW of (SM11947)	Direct (Setting)	Moderate Adverse	Yes	N/A	N/A	Moderate Adverse	Yes
Calvertsholm Cottages, cairn 320m NNW of (SM11950)	Direct (Setting)	Moderate Adverse	Yes	N/A	N/A	Moderate Adverse	Yes
Blackyett, cairn 224m E of (SM11951)	Direct (Setting)	Very Minor Adverse	No	N/A	N/A	Very Minor Adverse	No
Robgill Mains, Cairn 320m E of (SM11987)	Direct (Setting)	Very Minor Adverse	No	N/A	N/A	Very Minor Adverse	No
Calvertsholm, settlement 110m N of (SM12128)	Direct (Setting)	Very Minor Adverse	No	N/A	N/A	Very Minor Adverse	No
The Bracken, enclosed settlement and	Direct (Setting)	Very Minor Adverse	No	N/A	N/A	Very Minor Adverse	No

Asset	Type of Impact	Significance of Effect	Significant in EIA terms?	Mitigation	Means of Implementation	Residual Effect	Significant in EIA terms?
droveway 3280m WSW of (SM11994)							
Robgill Tower, fort 90m NW of (SM12157)	Direct (Setting)	Very Minor Adverse	No	N/A	N/A	Very Minor Adverse	No
Cumulative Effects							
Mossknowe House (LB9799)	Direct (Setting)	Minor Adverse	No	N/A	N/A	Minor Adverse	No
Stapleton Tower (LB3782)	Direct (Setting)	Moderate Adverse	No	N/A	N/A	Moderate Adverse	No
Frontiers of the Roman Empire: Hadrian's Wall (WHS)	Direct (Setting)	Minor Adverse	No	N/A	N/A	Minor Adverse	No
Calvertsholm Cottages, cairn 315m WNW of (SM11947)	Direct (Setting)	Moderate Adverse	No	N/A	N/A	Moderate Adverse	No
Calvertsholm Cottages, cairn 320m NNW of (SM11950)	Direct (Setting)	Moderate Adverse	No	N/A	N/A	Moderate Adverse	No

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