



Chapter 10

Archaeology and Cultural Heritage

Table of contents

10.1	Introduction	3
10.2	Legislation, Policy and Guidance	3
10.2.1	Legislation	3
10.2.2	Policy	3
10.2.3	Guidance	3
10.3	Consultation	3
10.4	Assessment Methodology and Significance Criteria	6
10.4.1	Study Area	6
10.4.2	Desk Study	6
10.4.3	Field Surveys	7
10.4.4	Assessment Methodology	7
10.4.5	Significance Criteria	8
10.4.6	Limitations to Assessment	8
10.5	Baseline Conditions	8
10.5.1	Introduction	8
10.5.2	Baseline Summary	8
10.5.3	Historical Background	9
10.6	Potential Effects	14
10.6.1	Mitigation by Design and Embedded Mitigation	14
10.6.2	Construction	14
10.6.3	Operation	14
10.7	Mitigation	19
10.7.1	Construction	19
10.7.2	Operation	19

10.8	Residual Effects	19
10.8.1	Construction	19
10.8.2	Operation	20
10.9	Cumulative Assessment	20
10.9.1	Construction	20
10.9.2	Operation	20
10.10	Summary	20
10.11	References	20

List of Figures

No table of figures entries found.
Figure 10.3 Cumulative Schemes
Figure 10.4 Viewpoints

List of Visualisations

Figure 10.5 Viewpoint 22: Wallace's House Fort
Figure 10.6 Viewpoint 23: The Knock, settlement (east)
Figure 10.7 Viewpoint 24: The knock, settlement (west)
Figure 10.8 Viewpoint 25: Spedlins Tower
Figure 10.9 Viewpoint 26: Ellisland Farm

List of Technical Appendices

Appendix 10.1 Determining the Value and Cultural Significance of Heritage Assets
Appendix 10.2 Assessment of Heritage Assets within the Site Boundary
Appendix 10.3 Assessment of Heritage Assets within 5km of the Turbine Locations
Appendix 10.4 Assessment of Heritage Assets between 5km and 10km of the Turbine Locations
Appendix 10.5 Archaeology and Cultural Heritage Gazetteer



Chapter 10

10 Archaeology and Cultural Heritage

10.1 Introduction

1. This chapter presents the results of the archaeology and cultural heritage assessment which has been undertaken as part of the Environmental Impact Assessment (EIA) Report. Archaeology and cultural heritage comprise a diverse range of elements that are referred to throughout the EIA Report as heritage assets.
2. Heritage assets are features created or that have undergone modification from human agency. This includes a wide range of visible and buried archaeological sites and monuments, as well as other historic features or places. Heritage assets comprise World Heritage Sites, Scheduled Monuments, Listed Buildings, Gardens and Designed Landscapes, Battlefields, Conservation Areas, Marine Protected Areas, other underwater sites, buried archaeological remains, other historic buildings, and earthworks.
3. The specific objectives of the chapter are to:
 - Describe the cultural heritage baseline;
 - Describe the assessment methodology and significance criteria used in the assessment;
 - Describe the potential effects, including direct and cumulative effects;
 - Describe the mitigation and, where appropriate, monitoring measures proposed to address likely significant effects; and
 - Assess the residual effects remaining following the implementation of mitigation.
4. Additional information which supports this chapter is presented in the following figures and technical appendices:
 - **Figure 10.1 Heritage Assets: Site Boundary**
 - **Figure 10.2 Heritage Assets: Study Area**
 - **Figure 10.3 Cumulative Schemes**
 - **Figure 10.4 Viewpoints**
 - **Figure 10.5 Viewpoint 22: Wallace's House, fort**
 - **Figure 10.6 Viewpoint 23: The Knock, settlement (east)**
 - **Figure 10.7 Viewpoint 24: The Knock, settlement (west)**
 - **Figure 10.8 Viewpoint 25: Spedlins Tower**
 - **Figure 10.9 Viewpoint 26: Ellisland Farm**
 - **Appendix 10.1 Determining the Value and Cultural Significance of Heritage Assets**
 - **Appendix 10.2 Assessment of Heritage Assets within the Site Boundary**
 - **Appendix 10.3 Assessment of Heritage Assets within 5km of the Turbine Locations**
 - **Appendix 10.4 Assessment of Heritage Assets between 5km and 10km of the Turbine Locations**
 - **Appendix 10.5 Archaeology and Cultural Heritage Gazetteer**
5. Where relevant, cross-reference is made to viewpoints from **Chapter: 5 Landscape and Visual**, where these coincide with the location of heritage assets in the wider landscape. All figures and appendices are referenced in the text where relevant.

10.2 Legislation, Policy and Guidance

10.2.1 Legislation

6. The following national legislation, national policy/strategy and guidance forms the background against which the assessment has been made:
 - The Ancient Monuments and Archaeological Areas Act 1979; and
 - Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997.

10.2.2 Policy

7. The national planning policy relevant to archaeology and cultural heritage that has been considered as part of the assessment includes:
 - National Planning Framework for Scotland 3 (NPF3) (Scottish Government, 2014a);
 - Scottish Planning Policy (SPP) Paragraphs 135-151 (Scottish Government, 2014b);
 - Historic Environment Policy for Scotland (HEPS) (Historic Environment Scotland (HES), 2019a); and
 - Planning Advice Note (PAN) 2/2011: Planning and Archaeology (Scottish Government, 2011).
8. The local planning policy relevant to archaeology and cultural heritage that has been considered as part of the assessment includes:
 - Dumfries and Galloway Council Local Development Plan (LDP2) 2019
 - Policy HE1: Listed Buildings
 - Policy HE2: Conservation Areas
 - Policy HE3: Archaeology
 - Policy HE4: Archaeological Sensitive Areas
 - Policy HE6: Garden and Designed Landscapes
 - Policy IN1: Renewable Energy
 - Policy IN2: Wind Energy
 - LDP2 Draft Supplementary Guidance (2018): Historic Built Environment
 - LDP2 Draft Supplementary Guidance (2018): Wind Energy Development; Development Management Considerations. (Section H: Historic Environment and Cultural Heritage)
 - LDP Draft Supplementary Guidance (2018): Part 1 Wind Energy Development; Development Management Considerations – Appendix C – Landscape capacity Study.

10.2.3 Guidance

9. The following guidance has been applied to the assessment process:
 - Environmental Impact Assessment Handbook (Scottish Natural Heritage (SNH) & HES, 2018);
 - Designation Policy and Selection Guidance (HES, 2019b); and
 - Managing Change in the Historic Environment (HES, 2016).
10. All elements of the assessment have been undertaken in accordance with the following policies and guidelines of the Chartered Institute for Archaeologists (CIfA):
 - By-laws: Code of Conduct (CIfA, 2014a);
 - Standards and Guidance for Historic Environment Desk Based Assessment (CIfA, 2017); and
 - Standards and Guidance for commissioning work on, or providing consultancy advice on, archaeology and the historic environment (CIfA, 2014b).

10.3 Consultation

11. Consultation has taken place with a number of stakeholders, with summaries of the responses highlighted in **Table 10.1**.

Consultee	Response	Action
HES Scoping Opinion	<p>Wallace's House, fort 1100m NW of Burrance Bridge (SM604) is located within the development site boundary. While the fort would not experience direct impacts from the turbines, the proposals may give rise to indirect impacts on the setting of the following assets located within the vicinity of the site.</p> <ul style="list-style-type: none"> The Knock, settlement 300m WSW of Burrancehill Cottages (SM3489) Maggiemauts Knowe, fort 150m NE of Courancehill (SM3488) Davie's Kirk fort 40m W of (SM3299) Tanner's Linn, earthwork (SM10533) Ogle Linn, earthwork (SM10497) Raehills (GDL00322) Cowhill Tower (GDL00109) Drumlanrig Castle (GDL00143) Ellisland Farm (LB4232) Drumlanrig Castle (LB3886) Raehills House (LB9898) <p>We recommend that any EIA Report should include a detailed assessment of impacts (direct and indirect) on the setting of the heritage assets in the vicinity of the site. We would also expect the EIA Report to address the impact of the development on these monuments individually and on the relationship between them.</p>	The heritage assets listed in the Scoping Comment column have been assessed as requested and all potential relationships between possible contemporary heritage assets discussed.
	We have reviewed the EIA Scoping Report (April 2020) submitted as part of this scoping request. We are content to agree the methodology and the proposed approach to field surveys. We are also content to agree on the inner and outer study area proposed.	Response noted.
	<p>The description of the baseline data collection criteria is not entirely clear. Although we note that an area within 10km of the development has been identified as an area of search section 8.3 of the document adds two further search factors without defining them. Heritage assets "with a larger presence" will be considered outwith this 10km boundary, along with "designated sites which are within the ZTV". The criteria for a site to have "a larger presence" is not clear, nor is it obvious if the reference to the ZTV relates to the area within the 45km buffer shown in Figure 5.3 or another undefined zone. We recommend that the use of such terms is clarified in any EIA Report produced for this proposal.</p> <p>Notwithstanding these ambiguities, we are content that a 10km search zone around the development area should be sufficient to identify most sites that</p>	<p>The study area has been more clearly defined so that all designated heritage assets within the remit of HES have been included within 10km of the turbine locations. The use of heritage assets "with a larger presence" is no longer defined as a search criteria and only those heritage assets recommended by HES that fall out with the 10km buffer have been considered.</p>

Consultee	Response	Action
	could experience an impact from the development, especially if combined with the potential to assess designated sites up to 45km distant and to consider undesigned sites that fall within the "larger presence" category.	
	Section 8.5 recommends that World Heritage Sites, Inventory Battlefields and Historic Marine Protection Areas should be scoped out of the EIA process as there are none within their study area. We are content with this for our own interests however, the Applicant should ensure to consult with Historic England on this matter, as part of the World Heritage Site for Hadrian's Wall lies within the ZTV area.	Response noted. No engagement has taken place with Historic England due to the distances involved and the lack of potential for significant effects arising from the Proposed Development.
	<p>Section 8.6 covers the potential effects of the works, subdividing them into construction and operational effects. We are content that the Report shows an understanding of the effects that could result in impacts to cultural heritage assets. However, we are concerned by an apparent discrepancy in the way these effects are considered in this section. In sections 8.2 and 8.3, a 10km buffer is considered necessary to identify assets that could be impacted by the development. But section 8.6.2 which addresses likely significant effects once the wind farm is operational, contradicts this:</p> <p>"It is considered only those assets within, or within relatively close proximity to the Proposed Development (circa 5km) may potentially receive a significant effect on their settings during construction and operation. The designated assets out with the 5km buffer can be scoped out of full assessment where the distances from the Proposed Development, or the presence of intervening topography, or other screening significantly reduces the likelihood of indirect impacts from the Proposed Development. This will be confirmed and reported in the EIA Report".</p> <p>We consider this 5km limit adds a level of confusion to the assessment process. Any asset anywhere within the 10km buffer can be scoped out if intervening topography reduces the likelihood of visual, aural or other setting impacts to a negligible level.</p> <p>Likewise, an asset 15 km away may experience a significant impact on its setting if a key relationship or view is affected. The criteria outlined in section 8.3 should be applied to section 8.6.</p>	The study area has been more clearly defined so that all designated heritage assets within the remit of HES have been included within 10km of the turbine locations and those heritage assets recommended by HES that fall out with the 10km buffer have also been considered.
	We note that the methodology to assess the significance of effect will follow the guidelines outlined in the Environmental Impact Assessment	Response noted. The visualisations requested through scoping have been included within the

Consultee	Response	Action
	<p>Handbook and that CIFA standards and HES Managing Change guidance will be used to inform this process. We are content that this process should produce an adequate assessment.</p> <p>We welcome the proposals in Section 8.1 to consult on the requirement for visualisations as part of the EIA process. Our response should offer our help in assessing the need for illustrative material once the initial identification of relevant heritage assets has been undertaken.</p>	<p>assessment. Further consultation was undertaken, the results of which can be viewed below.</p>
	<p>There is a large number of scheduled monuments in the vicinity of the proposed development.</p> <p>Wallace's House, fort 1100m NW of Burrance Bridge (SM604) is located within the development site boundary. While the fort would not experience direct impacts from the turbines, the overall design should ensure this monument is also protected from direct impacts from other works such as quarry pits, access roads, anemometer masts, power lines and general storage and working areas. These features should also be considered when assessing setting impacts for all monuments potentially affected.</p> <p>The development may impact on the setting of the following sites and any EIA Report produced should include an assessment of such impacts including any effects on the relationship between these sites.</p> <ul style="list-style-type: none"> • The Knock, settlement 300m WSW of Burrancehill Cottages (SM3489); • Maggiemauts Knowe, fort 150m NE of Courancehilly (SM3488); • Davie's Kirk fort 40m W of (SM3299); • Tanner's Linn, earthwork (SM10533); and • Ogle Linn, earthwork (SM10497) <p>The possible relationships between monuments should also be considered as part of their setting assessments. There is a notable concentration of later prehistoric and medieval sites in an area arcing around the SE and E sides of the windfarm. It is likely that at least some of these sites would have been built with specific reference to each other and this could form an important part of their settings.</p>	<p>The heritage assets listed in the Scoping Comment column have been assessed as requested and all potential relationships between possible contemporary heritage assets discussed.</p>
	<p>The proposed viewpoints are very much focussed on wider landscape and lighting impacts than for assessing impacts on individual historic buildings or GDLs. Where these impacts seem potentially significant or uncertain, provision of photomontages would be helpful. In some instances below we have suggested potential viewpoints, but are not able to do this for all potentially-affected assets on the basis</p>	<p>Photomontages and wireframes have been included for the heritage assets requested where these would have visibility of the Proposed Development according to the Zone of Theoretical Visibility (ZTV). Further consultation Consultation</p>

Consultee	Response	Action
	<p>of the current information: we will be happy to discuss this further with the Applicants, if that would be useful.</p>	<p>took place with HES, the results of which can be viewed below.</p>
	<p>The Scoping report identifies the following Designed Landscapes that may be affected by the proposals.</p> <ul style="list-style-type: none"> • Raehills (GDL00322); • Cowhill Tower (GDL00109); and • Drumlanrig Castle (GDL00143). <p>We agree that all these should be assessed. In addition, Maxwellton (Glencairn Castle) (GDL00276) should also be assessed. Of these it seems that Raehills is most likely to be significantly affected. A photomontage and wireframe looking towards Raehills House and the proposed development, taken from within the designed landscape or A701 should be produced.</p> <p>Because of the particular significance of Drumlanrig castle and garden, any potential impact needs to be carefully investigated. We suggest that a photomontage and wireframe from the east parterre, looking towards the proposed turbines would be helpful. It would be helpful if the location of the existing turbines could also be marked in this view.</p>	<p>Photomontages and wireframes have been included for the heritage assets requested where these would have visibility of the Proposed Development according to the Zone of Theoretical Visibility (ZTV).</p> <p>There would be no visibility within the Raehills GDL, but a viewpoint (VP4) has been provided in the LVIA from the A701 which overlooks the designation (see Figure 5.14 Viewpoint 4 – A701 Raehills). A viewpoint (VP13) has also been provided from Drumlanrig Castle gardens (see Figure 5.23 Viewpoint 13 – Drumlanrig Castle Gardens). Viewpoint 18 on the A76 is in close proximity to Cowhill Tower (see Figure 5.28 Viewpoint 18 – A76 Holywood).</p> <p>Further consultation took place with HES, the results of which can be viewed below.</p>
	<p>It is important that the Applicant considers the impact on the setting of A-listed buildings in the vicinity, particularly where it seems likely that the turbines may be visible in important views to and from these buildings.</p> <p>In addition to Raehills House (LB9898) and Drumlanrig Castle (LB3886), there may be significant impacts on the settings of the group of A-listed buildings near Templand; and on Ellisland Farm (LB4232). There appear to be long views towards the development site from the approach drive to Ellisland, and the impact here could be significant. Ellisland was the home of Robert Burns and it is important that the setting of this group of buildings is not adversely affected. A photomontage / wireframe view taken from the drive, looking towards the farm and development site should be produced. We suggest that the view should be taken from a sensible point near the west end of the carpark. The line of deciduous trees to the east of the farm is unlikely, in our view, to provide any significant screening protection against a visual impact here.</p>	<p>Photomontages and wireframes have been included for the heritage assets requested where these would have visibility of the Proposed Development according to the Zone of Theoretical Visibility (ZTV). Visualisations are included for Ellisland Farm.</p>

Consultee	Response	Action
Dumfries and Galloway Council Archaeologist Scoping Opinion	No official response provided to the scoping report but scope notes were provided along with the Historic Environment Record (HER) data. The following asset types are to be included within the baseline for assessment: <ul style="list-style-type: none">Regionally significant heritage assets within 5km where the landscape setting is considered a key characteristic;Category B and C Listed Buildings within 5kmAreas of Archaeological Interest within 10km;Undesignated assets deemed to be of national significance within 10km; andNon-Inventory Gardens and Designed Landscapes within 10km.	Requirements noted from Historic Environment Record (HER) data extract incorporated into the baseline.
Kirkmichael Community Council Scoping Opinion	The Kirkmichael Community Council wanted to ensure that the grave of James Ferguson is considered in the assessment.	The asset is known and listed within the HER, albeit incorrectly located, and was visited during the walkover survey.
HES Post Scoping Consultation	<p>Having checked the revised layout and ZTV, HES are of the view that the revised scheme does not alter the validity of the original Scoping comments.</p> <p>HES are of the opinion that the turbines that have been removed from the revised design are those furthest away from the assets for their interests in the vicinity.</p> <p>HES state there has also been no obvious change to the proposed access route and other site infrastructure.</p> <p>In relation to Scheduled monuments, HES state the same monuments still need to be assessed for impacts in the same ways.</p> <p>In relation to GDLs and Category A listed buildings, HES state the same GDLs and A-listed buildings still need to be assessed for impacts in the same ways.</p> <p>HES also state that on assessment of the submitted ZTV, it also appeared that the following additional Category A-listed buildings may be intervisible with the windfarm and therefore recommend that the following A-listed buildings should also be assessed.</p> <ul style="list-style-type: none">Amisfield Tower (LB17233)Elshields Tower and Adjoining House, Walled Garden and Gatepiers at South (LB9970)Ross Mains (LB10353)	HES comments have been welcomed. The assessment has considered all of the heritage assets identified within their scoping and post-scoping responses, and are detailed within the report.

Table 10.1: Consultation Responses

10.4 Assessment Methodology and Significance Criteria

10.4.1 Study Area

12. Although the focus of this chapter is on the Site Boundary and the impacts from the Proposed Development, a wider, archaeological contextual background is presented for the general area. The study of the heritage assets in the surrounding landscape was necessary to establish the local archaeological and historical context, to provide a broader understanding of the historical development of the Site and the potential for as-yet-unidentified archaeological remains within the Site Boundary.
13. The nature and extent of the cultural heritage resource has been examined to determine the potential impact of the Proposed Development on heritage assets within the Site Boundary and the wider Study Area.
- The Site Boundary is shown in **Figure 10.1 Heritage Assets: Site Boundary** and forms the basis for the identification of heritage assets that could receive direct impacts arising from the construction of the Proposed Development. **Figure 10.1 Heritage Assets: Site Boundary** details the extent of the Site, the Proposed Development layout and the location of heritage assets identified.
 - The Study Area is shown in **Figure 10.2 Heritage Assets: Study Area** and equates to a 10km area extending from the turbine locations. This Study Area has been used for the identification of heritage assets whose setting is significant enough to be affected by the Proposed Development (including cumulative effects). This Study Area extent was agreed in principle by statutory consultees as sufficient to identify sites that could experience impact from development. **Figure 10.2 Heritage Assets: Study Area** details the Proposed Development, together with the blade tip height ZTV and the location of baseline heritage assets up to 10km from the turbine locations from which there would be a theoretical view of the turbines.

10.4.2 Desk Study

14. The assessment has been informed by a review of available archaeological records, historical documentary evidence, cartographic evidence, and photographic material. This has involved a consultation of the following sources:
- GIS data on Scheduled Monuments and Listed Buildings obtained from HES;
 - GIS data on Cultural Heritage sites obtained from the Scottish National Record of the Historic Environment (SNRHE) which is maintained by HES;
 - Information from the Dumfries and Galloway Council HER;
 - Readily accessible primary and secondary historical sources for information relating to the area's historical past, including past land use;
 - Pre-Ordnance Survey maps of the Site Boundary were consulted through the National Library of Scotland (NLS) website. The relevant maps date in range from the seventeenth to the nineteenth centuries;
 - First and subsequent editions of the Ordnance Survey maps of the area of interest, also consulted through the NLS website;
 - LIDAR datasets of the general area through the Scottish Remote Sensing Portal maintained by the Scottish Government; and
 - The solid and drift geology for the Site has been identified based on that recorded by the British Geological Survey/ Geological Survey of Great Britain maps.
15. To aid in the assessment, a ZTV was produced to indicate the areas from which the Proposed Development may be visible (**Figure 10.2 Heritage Assets – Study Area**). The ZTV was produced by computer modelling. All turbine locations with proposed height data for the Proposed Development were overlain on a digital terrain model (DTM) and 'lines of sight' were computer generated to show where they would be visible from these points, and thus, the places from which the Proposed Development may be visible. The ZTV used the Ordnance Survey Terrain 5 DTM, and allowed for a viewer eye height of 2m.

16. It should be noted that this is a 'bare ground' ZTV, making no allowance for screening from buildings or vegetation. This represents a realistic indicator of areas from where the Proposed Development would be visible. However, there are places where existing buildings or vegetation would partially or wholly screen the view, and there may be minor variations in the landform not represented in the DTM that mean there are small areas with a view not shown, or areas shown as having a view that, in reality, do not.

10.4.3 Field Surveys

17. A targeted walkover survey of the turbine locations and access tracks was carried out in March and August 2020, with the following aims to:
- Assess the baseline condition of the known heritage assets within the Site Boundary, identified through the desk-based assessment;
 - Identify any further features of cultural heritage interest not detected through the desk-based assessment that could be affected by construction of the Proposed Development; and
 - Identify areas with the potential to contain currently unrecorded buried archaeological remains.

18. All areas of open rough pasture grazing hillside were surveyed in full and all heritage assets that were identified through the desk-based assessment were visited. Heritage assets identified by the desk-based assessment and located within areas of commercial forestry were visited, where access was possible, where they were identified as being close to the infrastructure of the Proposed Development. Field visits were undertaken to selected heritage assets in the Study Area in order to assess their baseline settings.

10.4.4 Assessment Methodology

19. Cultural significance lies in the value of a heritage asset to this and future generations because of its heritage interest; this may be artistic, archaeological, architectural, historic, traditional, aesthetic, scientific or social. Known and potential heritage assets within the Site Boundary and the wider Study Area have been identified from national and local designations, HER data and professional opinion.
20. The determination of the cultural significance or value of heritage assets is based on statutory designation and/or professional judgement against the characteristics and criteria expressed in HES Designation Policy and Selection Guidance (HES, 2019) and HEPS (HES, 2019).
21. A degree of professional judgement is necessary, guided by acknowledged standards, designations and priorities when evaluating the importance or significance (and hence the 'value') of heritage assets. It is also important to understand that buried archaeological remains may not be well understood at the time of initial assessment, and therefore can be of uncertain value.
22. The determination of "Setting" has been undertaken in accordance with guidance provided within the Managing Change Guidance (HES, 2016). A three-stage process was undertaken to assess the impact of the Proposed Development options on the setting of heritage assets:
- Stage 1: Designated and undesignated heritage assets that might be affected by the Proposed Development were identified. The potential for impacts on the designated assets in the wider landscape due to the potential inter-visibility with the Proposed Development were also determined through the desk based review and a site walk over survey;
 - Stage 2: The setting of all baseline heritage assets was defined by establishing how the surroundings contribute to the ways in which the asset is understood, appreciated and experienced; and
 - Stage 3: The way in which the Proposed Development would impact upon setting was then assessed for all baseline assets.

23. **Table 10.2** identifies factors which are appropriate to consider during the assessment of heritage assets, with the adoption of five ratings for value: very high, high, medium, low, and negligible.

Value	Example
Very High	<ul style="list-style-type: none">– World Heritage Sites (including nominated sites)– Assets of acknowledged international importance
High	<ul style="list-style-type: none">– Scheduled Monuments (including proposed sites)– Listed Buildings (Category A and B)– Battlefields included within the Inventory– Marine Protected Areas– Gardens and Designed Landscapes– Conservation areas containing nationally important buildings– Undesignated assets of scheduled quality and importance– Assets of national importance
Medium	<ul style="list-style-type: none">– Listed Buildings (Category C)– Conservation areas containing buildings that contribute significantly to its historic character– Assets of regional importance
Low	<ul style="list-style-type: none">– Assets of local importance– Assets compromised by poor preservation and/or poor survival of contextual associations– Buildings of modest quality in their fabric or historical association
Negligible	<ul style="list-style-type: none">– Assets with very little or no surviving archaeological interest– Artefact find spots (where the artefacts are no longer in situ and where their provenance is uncertain)– Poorly preserved examples of particular types of minor historic landscape features (e.g. quarries and gravel pits, dilapidated sheepfolds, etc)

Table 10.2: Criteria for Assessing the Value of Heritage Assets

24. The criteria for assessing the magnitude of impact from the Proposed Development on heritage assets is shown in **Table 10.3**.

10.4.5 Significance Criteria

25. The significance of the effect of change on an attribute is a function of the importance of the attribute and the scale of change. For the purpose of this assessment, effects of **Moderate** or greater significance are considered to be potentially significant in the context of the EIA regulations and are highlighted in bold in **Table 10.4**.

Adverse		Beneficial
Major	<ul style="list-style-type: none">Changes to most or all key archaeological materials or key historic building elements such that the heritage asset is totally altered.Comprehensive changes to setting such as extreme visual effects, gross change of noise or change to sound quality, or fundamental changes to use or access.	<ul style="list-style-type: none">Preservation of a heritage asset in situ where it would otherwise be completely or almost lost.Changes that appreciably enhance the cultural significance of a heritage asset and how it is understood, appreciated and experienced.
Moderate	<ul style="list-style-type: none">Changes to many key archaeological materials or key historic building elements, such that the heritage asset is clearly modified.Considerable changes to setting that affect the character of the heritage asset such as visual change to many key aspects or views, noticeable differences in noise or sound quality, or considerable changes to use or access.	<ul style="list-style-type: none">Changes to important elements of a heritage asset's fabric or setting, resulting in its cultural significance being preserved (where this would otherwise be lost) or restored.Changes that improve the way in which the heritage asset is understood, appreciated and experienced.
Minor	<ul style="list-style-type: none">Changes to key archaeological materials or key historic building elements, such that the heritage asset is slightly altered.Slight changes to setting such as slight visual changes to few key aspects or views, limited changes to noise levels or sound quality, or slight changes to use or access.	<ul style="list-style-type: none">Changes that result in elements of a heritage asset's fabric or setting detracting from its cultural significance being removed.Changes that result in a slight improvement in the way a heritage asset is understood, appreciated and experienced.
Negligible	<ul style="list-style-type: none">Very minor changes to archaeological materials, historic buildings elements, or setting.Very minor changes to setting such as virtually unchanged visual effects, very slight changes in noise levels or sound quality, or very slight changes to use or access.	<ul style="list-style-type: none">Very minor changes that result in elements of a heritage asset's fabric or setting detracting from its cultural significance being removed.Very minor changes that result in a slight improvement in the way a heritage asset is understood, appreciated and experienced.
No Change	<ul style="list-style-type: none">Changes to fabric or setting that leave significance unchanged.	

Table 10.3: Factors in the Assessment of Magnitude of Impacts

Magnitude of Impact						
Value		Major	Moderate	Minor	Negligible	No Change
	Very high	Very Large	Large or Very Large	Moderate or Large	Slight	Neutral
	High	Large or Very Large	Moderate or Large	Moderate or Slight	Slight	Neutral
	Medium	Moderate or Large	Moderate	Slight	Neutral or Slight	Neutral
	Low	Slight or Moderate	Slight	Neutral or Slight	Neutral or Slight	Neutral
	Negligible	Slight	Neutral or Slight	Neutral or Slight	Neutral	Neutral

Table 10.4: Significance of Effect

10.4.6 Limitations to Assessment

26. The technical terminology applied to the assessment process is based on that contained within the Scottish Planning Policy framework. Professional judgement is applied throughout.
27. The desk-based assessment on which this assessment has been based was extensive but not exhaustive, thus there remains the possibility that there may be sites or features of archaeological or historical significance that have not been identified.
28. During the walkover survey, every effort was made to thoroughly investigate all turbine locations and access tracks. However, some areas could not be walked over due to the presence of immature forestry and waterlogged ground conditions. While these areas were viewed from the side, the visibility of any potential archaeology present will have been considerably reduced.

10.5 Baseline Conditions

10.5.1 Introduction

29. The locations of the designated and undesignated heritage assets which lie within the Site Boundary and Study Area are provided in **Appendix 10.5 Archaeology and Cultural Heritage Gazetteer** and shown in **Figure 10.1 Heritage Assets: Site Boundary**, and **Figure 10.2 Heritage Assets: Study Area**. The baseline includes all designated heritage assets, and undesignated assets deemed to be of national significance by the Dumfries and Galloway Council Archaeologist, out to 10km from the turbine locations, that are within the ZTV of the Proposed Development. Category B and C Listed Buildings, as well regionally significant heritage assets where their landscape setting is considered a key characteristic are also included in the baseline up to 5km from the turbine locations.

10.5.2 Baseline Summary

30. The Site Boundary contains 12 known heritage assets including one Listed Building (Garvald Church and Church Yard LB10382 – **HA72**). The remaining 11 heritage assets are undesignated assets dating from the Post-Medieval and Modern period.
31. The Study Area contains a further 102 heritage assets that have been identified as being within the ZTV of at least one of the turbines, and there are two further heritage assets outside the Study Area that have been recommended for inclusion in the baseline after consultation with HES. Of these 104 assets, there are 32 heritage assets within 5km of the turbine locations, comprising:

- 11 Scheduled Monuments;
 - 13 Listed Buildings (10 Category B, and three Category C);
 - One Garden and Designed Landscape;
 - One Archaeologically Sensitive Area;
 - Two Non-Inventory Gardens and Designed Landscapes;
 - Three undesignated heritage assets of regional significance; and
 - One undesignated heritage asset deemed to be of national significance.
32. The remaining 72 heritage assets in the Study Area lie between 5km and 10km of the turbine locations and consist of:
- 31 Scheduled Monuments;
 - Seven Category A Listed Buildings;
 - One Category C Listed Building deemed to be of national significance;
 - One Gardens and Designed Landscapes;
 - One Archaeologically Sensitive Area;
 - Seven Non-Inventory Gardens and Designed Landscapes; and
 - 24 undesignated heritage assets deemed to be of national significance.
33. There are also 35 heritage assets identified within 10km of the turbine locations that would have no visibility of the Proposed Development according to the ZTV produced. These assets are shown in **Table 10.5** and have been scoped-out of the assessment and are therefore not included within the Gazetteer.

Reference Number	Site Name	Reference Number	Site Name
SM10789	Beattock Hill Settlement	LB10375	Steading, Burrance House
SM10540	Auchencairn cairn	LB10380	Steading, Easter Parkgate
SM10545	Stidriggs Fort and Settlement	GDL00131	Dalswinton
SM12658	Stidriggs Cairn	MDG25606	Closeburn Castle Non Inventory Garden and Designed Landscape
SM5919	Shaw's Moor Cairnfield and Ring-Cairn South of Hospital Wood	MDG333	Craigielands Non Inventory Garden and Designed Landscape
SM5920	Shaw's Moor Cairnfield and Ring-Cairn South East of Hospital Wood	MDG341	Eyre Burn Building
SM8610	Kinnelhead Tower	MDG364	Threepen Burn Cairn
SM644	The Belt Fort	MDG6221	Dalswinton Wood Cairn
LB9842	Craigielands House	MDG6225	Duncow Burn Cairn
LB3953	Wallacehall Academy and Schoolhouse, Closeburn	MDG6338	Castle Hill Standing Stone
LB3945	Gubhill Farmhouse	MDG6448	Townfoot Settlement
LB9880	Hartfield Tower	MDG6496	Closeburn Park
LB9883	Walled Garden, Raehills	MDG6720	Pinnacle Hill
LB9884	Crunzierton, Raehills	MDG6787	Duff Kinnel Bank
LB9885	St. Ann's Bridge	MDG7313	Garpol Water Burnt Mound
LB9898	Raehills House	MDG9409	Dalswinton Causewayed Enclosure
LB9902	Killing House, Raehills	MDG309	Bankend Temporary Camp
LB9903	Stables, Raehills		

Table 10.5: Heritage Assets with no visibility of any turbines

10.5.3 Historical Background

34. The historical background presents a summary of the baseline information provided in the Gazetteer and is focussed on interpreting the information in order to assess the potential for encountering as yet unknown archaeological features within the Site.
35. The principal sites and features within the Site Boundary and Study Area are summarised in the context of a timeline of archaeological periods from Prehistoric through to Modern. The time periods discussed are defined as follows:
- Prehistoric:
 - Palaeolithic 12,000 – 11,000 BCE
 - Mesolithic 11,000 – 4,100 BCE
 - Neolithic 4,100 – 2,500 BCE
 - Bronze Age 2,500 – 800 BCE
 - Iron Age 800 BCE – CE 400
 - Roman CE 77 – 211;
 - Medieval CE 400 – 1560;
 - Post-Medieval CE 1560 – 1900; and
 - Modern CE 1900 – Present

10.5.3.1 Prehistoric

36. The earliest Prehistoric inhabitants of Scotland only leave ephemeral traces of their lives within the archaeological record. The people of the Palaeolithic and Mesolithic periods were nomadic hunter gatherers and left little evidence of their existence, with most heritage assets encountered related to flint scatters. The majority of known heritage assets from this period come from coastal regions with the dominant influence on settlement during this period relating to the availability of resources. The location of the Proposed Development on higher ground away from the main watercourses and coastal areas that would have easily supported such a nomadic existence, make it an unlikely location for encountering Mesolithic or earlier activity.
37. The Neolithic period in Scotland is identified through the development of more sedentary lifestyles, with seasonal rather than continual movements becoming more evident alongside the growth of farming. The Site is surrounded by areas of glacial till consisting of free draining sands and gravels that are ideal soil environments for people to farm and live on. Settlement evidence from the Neolithic is scarce due to the semi-transient nature of activity and is typically evidenced by pit clusters and findspots. The most visible aspect of this period in the archaeological record are ritual or funerary monuments such as stone circles, cursus monuments, henge monuments, standing stones, burial cairns, and other prominent stone features. Within the Study Area there are several examples of these stone monuments, with the majority of these related to funerary activity.
38. Three burial cairn sites (**HA22**, **HA65**, and **HA70**) interpreted as being of Neolithic date, are located within the Study Area, with one of these, the Stidrigg long cairn (SM640) (**HA18**), an example of a cairn that probably contained a chamber at one end with the cairn constructed from large piles of stone. Chambered cairns are typically related to Early Neolithic burial practices, with the sites used by whole communities and numerous bodies buried together.
39. Within the Study Area are three standing stones at Poldean (SM12697) (**HA18**), Irvine's Pillar (MDG21522) (**HA28**), and Skip Knowe (MDG7318) (**HA41**), that may date to this period, as well as pit defined enclosures at Lochbrow (MDG9610) (**HA79**) and Trailflat (MDG8860) (**HA105**), and a cursus monument at Lochbrow (MDG9606) (**HA77**). The pit defined enclosure may relate to funerary activity, but the cursus monument is thought to be an avenue or processional way for ritual activities, comprising a long enclosure defined by lines of pits excavated in phases to extend the monument on a regular basis. The size of these monuments and their typical relationship with other large timber or stone monuments such as henge monuments are clear evidence of a sense of community within this period despite the semi-transient nature of the settlement evidence.
40. These communal activities continue into the Bronze Age with the standing stones mentioned above just as likely to date to this period. However, the cairns of the Late Neolithic and Early Bronze Age evidence a change in burial practice to individual burials. The other six cairns or barrows within the Study Area (**HA10**, **HA13**, **HA23**, **HA35**, **HA37**, and **HA68**,) and the barrows or ring ditches at Lochbrow (MDG9611; **HA75** and MDG9318; **HA80** respectively), and Trailflat (MDG6701) (**HA106**) are more reminiscent of these later practices. These cairns are all circular in shape and are less likely to have contained chambers, with burials involving the deposition of the body within a stone cist, which was then covered by the cairn of stone or mound of earth.

41. Despite the continuity in the creation of stone monuments from the Neolithic into the Bronze Age, there are significant changes during the Later Bronze Age in relation to settlements and burial practices. The seasonal movements of the Neolithic were abandoned in the Bronze Age and enclosed and unenclosed houses with possible field systems begin to become visible from archaeological sites of this period. Examples of these settlements can be seen within the Study Area at Garpol Water (MDG7311 and MDG7312) (**HA1**) (**HA2**), and Gatet Hill (MDG7315) (**HA3**) where hut circles discovered could relate to Bronze Age or later settlement. Other settlement evidence comes from the creation of burnt mounds during this period, where water troughs were excavated close to a stream or burn, and the water heated using hot stones, thought to be for cooking. These heritage assets are visible in the archaeological record by the presence of large arcing stone filled mounds created when the hearth material and heat fractured stones are discarded after each use. Two examples of burnt mounds can be found within the Study Area at Watch Knowe (MDG8769) forming part of the scheduled area around Kinnelhead Cottage (SM12615) (**HA6**) and Knockbrack (MDG5111) (**HA34**).
42. During the Early Bronze Age and beyond, burial practices become less monumental with cremation burials in decorated urns, and short cist internments becoming more prominent as time goes on. Short cist burials that include the deposition of food vessels, and the use of upturned urns for cremations are typical of Bronze Age burial traditions, with the majority of similar sites dating from the Early Bronze Age (Stewart & Barclay, 1997).
43. Located to the south east of the Site Boundary, the Whitestanes Moor Archaeologically Sensitive Area (ASA) (**HA84**) provides evidence for all of these settlement and funerary changes, with the area containing evidence of occupation by a Bronze Age community. The Whitestanes Moor cairnfield and enclosures (MDG6219) (**HA90**) consist of 28 clearance cairns and three small enclosures that probably relate to field systems and possible small structures. Nearby to the south east, the Watchman Hill cairns (MDG6233) (**HA97**) comprise a group of 40 small cairns that are also likely to be clearance cairns related to the creation of field systems. These two sites are thought to be contemporary with the Whitestanes Moor cairnfield and cremation cemetery (MDG6231) (**HA89**), comprising 35 cairns and 12 enclosures, one of which contained the cremation cemetery dating to 1360 BCE.
44. Further Prehistoric field systems in the study area are located to the east of the Site Boundary, at Gawin Moor Cairns and field system (SM2262) (**HA60**), and Kirkholm Hill enclosure (SM12737) (**HA67**). The Kirkholm Hill enclosure is also close to another cremation cemetery at Dinwoodie Mains (SM7215) (**HA69**).
45. The later Prehistoric period from the first millennium BCE to CE saw a continuation of larger settlements with less visibility of ritual and funerary monuments. The Iron Age is characterised by the creation of hill forts and promontory forts, and the Study Area contains numerous examples. Wallace's fort (SM604) (**HA66**) is a prime example of a promontory fort, located on a steep sided promontory at the confluence of two burns, with a massive earthen rampart blocking access from the west. The fort is also reputedly the site of a camp set up by William Wallace while planning the capture of Lochmaben Castle in 1297.
46. The hill forts of Maggiemaut's Knowe (SM3488) (**HA62**) and Davie Kirk's (SM3299) (**HA59**) lie to the north east of Wallace's fort, forming an approximate north east to south west line of forts in this area over a 1.5km area, with both forts consisting of large ramparts with external ditches. A further 12 hill forts or promontory forts (**HA6**, **HA16**, **HA20**, **HA21**, **HA26**, **HA54**, **HA57**, **HA87**, **HA91**, **HA100**, **HA114**) are visible within the Study Area, indicating the abundance of Iron Age habitation throughout the area. The hill fort at Beattock Hill (SM4748) (**HA6**) is a prime example of how Iron Age communities used these forts as focal points for further settlement, with many structures relating to the later Prehistoric period contained within the Beattock Hill Archaeologically Sensitive Area (**HA11**).
47. As well as the hill forts and promontory forts that are prevalent throughout Scotland, other types of defended settlement are present during the Iron Age with each region developing their own unique style of house or settlement type. In Dumfries and Galloway, scooped settlements are prominent examples of a local settlement style with similar sites found in Northern England. Within the Study Area there are four examples of this type of settlement: Eyre Burn scooped settlements (SM12607) (**HA15**) and associated clearance cairns (MDG9777 and MDG9778) (**HA14**) (**HA17**); Plewlands scooped settlement (SM10547) (**HA15**); Parks scooped settlement (SM12729) (**HA25**); and Raehills scooped settlement (SM10548) (**HA38**). These settlements are typically 50m in diameter and are formed by the creation of a scoop or cut into the side of a hill, with the excavated material used to create a thick defensive bank around the settlement. Other more common settlement types are also seen at Easter Earshaig (SM10790) (**HA4**), Stanshielrig (SM4057) (**HA7**), Kinnelhead (SM12615) (**HA8**), Dinwoodie (SM12661) (**HA73**), Lochbrow (SM12712) (**HA81**), and Dinwoodie Green (SM12716) (**HA85**), all of which represent settlements that are close to former Bronze Age sites and show the continuation of use of these areas by local communities.

10.5.3.2 Roman

48. The Roman Period in Scotland is short-lived with occupation mainly concentrated in southern Scotland. Initial invasions occurred in circa CE 80 and again circa CE 138, leaving a lasting mark on the landscape as a result of the occupation. To the east of the Site Boundary, the former Roman arterial route from Carlisle to the Clyde valley is now occupied by the M74 motorway and the west coast railway line. This route survives in places and formerly linked the border with Crawford and Inveresk (MDG8701) (**HA12**), flanked by a long line of forts and fortlets along its length. Two of these arterial forts are within the outer study area: Milton Roman Fort (SM676) (**HA9**) and Hangingshaw Farm (SM12952) (**HA75**). To the south of the Site Boundary, the fortlet at Murder Loch (SM3833) (**HA103**) shows the Roman expansion west from the main route and provides further evidence of the changes that their occupation would have made to the local landscape and its inhabitants.

10.5.3.3 Medieval

49. In the histories related to Medieval Scotland there is a far greater sense of sovereign and religious control and influence within the country than is discussed in the Iron Age and earlier periods. This is reflected in the archaeological record by the prominence of heritage assets such as churches, churchyards, and castles. Evidence of Early Medieval activity is scarce within the archaeological record, with settlements that would have served the descendants of the hill forts and scooped settlements, rare discoveries. One possible Early Medieval site is known at Annfield Farmstead (MDG6215) (**HA102**) where two rectangular buildings are enclosed by a large ditch, suggesting it is a defended settlement of a later style than the typical scooped settlements. Two other examples are the Ogle Linn Earthwork (SM10497) (**HA36**) and Tanner's Linn earthwork (SM10533) (**HA52**) that are used to defend later promontory forts on the Ogle Linn and Tanner's Linn watercourses respectively.
 50. Once the country now known as Scotland was united under a single ruler in the 9th century, more substantial sites were constructed, such as the motte and bailey castle at Lochwood (SM698) (**HA29**), which was built by the Johnstone family in the 12th century and forms a central part of the Lochwood Non-Inventory Garden and Designed Landscape (MDG25635) (**HA27**), alongside the later adjacent stone built castle, dating from the 15th century. One other fortified site from this period is located at Gotterbie Moor (SM5689) (**HA101**), consisting of a homestead surrounded by a moat.
 51. Two examples of pre-reformation churches and burial ground also exist within the Study Area. Dating to the 12th century Dumgree church (SM10432) (**HA30**) is located to the north east of the Site Boundary, and is recorded as being given to the monks of Kelso in 1180. The church and graveyard are unusual as they are set within earlier cultivation terraces rather than uncultivated land being used for the construction. To the south east of the Site Boundary the Traillflat Churchyard (LB17205) (**HA109**) is all that survives of the church and grounds, comprising a roughly circular churchyard with 17th to 19th century stone monuments overlying the likely earlier burials.
 52. The final Medieval heritage assets relate to rare examples of everyday habitation of the area rather than the regal and religious heritage assets that feature more prominently. The settlement at Fauld Burn (SM12613) (**HA19**) is located to the north of the Site Boundary and consists of four buildings that were used as the basis for a complex of sheep pens in the Post-Medieval period. Located to the west of the Site Boundary, is the industrial site of Knockbrack Kiln (MDG5110) (**HA32**), comprising a substantial stone building containing a large conical kiln measuring 3.5m in diameter.
 53. Two beacons or signalling sites are also present within the Study Area; one constructed on top of the Blue Cairn (MDG6753) (**HA23**) up on the hills of the Forest of Ae; and the other at Kinnel Knock (MDG6784) (**HA40**) to the east of the Raehills estate and overlooking the village of St. Ann's to the south west.
- ### 10.5.3.4 Post-Medieval
54. The beginning of the Post-Medieval period in Scotland is characterised by the religious and political changes brought about by the Reformation in the 16th century, the union of the crowns in 1603 under James VI, followed by religious unrest and civil war throughout the 17th centuries. As previously stated, the church at Dumgree (SM10432) (**HA30**) is a rare example of a pre-Reformation church to survive this upheaval. The church at Traillflat (LB17205) (**HA109**) did not survive as the parish was suppressed in 1650, and the church at Garvald (LB10382) (**HA72**) did not survive the destruction brought by the Reformation either. It was reconstructed in 1617 and the walled churchyard was probably constructed around it at the same time. The church now sits ruinous at the edge of the Site Boundary access, containing visible gravestones ranging in date from the 17th to 19th century.
 55. There are a number of former estate houses within the Study Area, with Boreland Tower (SM10498) (**HA31**) one such example dating to the 16th century, forming the centre of the Dumgree estate to the north east. The gardens

and designed landscapes of Barony College (MDG25645) (**HA99**) and Glenae (MDG25625) (**HA107**) are remnants of other estates to the south of the Site Boundary, containing estate houses of the 19th and 18th century respectively. Other estates and manor houses set within large gardens of various sizes within the Study Area include Raehills (GDL00322) (**HA42**), Kirkmichael House (MDG25664) (**HA94**), Jardine Hall (MDG25648) (**HA96**), Castlehill (MDG24569) (**HA108**), Riddingwood House (MDG25627) (**HA111**), Amisfield (MDG25626) (**HA113**), Duncow (MDG20997) (**HA115**), and Cowhill Tower (GDL00109) (**HA116**). These estate grounds contain an abundance of the Listed Buildings within the Study Area, most of which date from the 19th century, and a few that date from the late 18th century, such as those within the Raehills Garden and Designed Landscape (GDL00322) (**HA42**).

56. Away from the main estates, the landscape would have been one of agricultural activity with farmsteads and crofts dispersed throughout the area in the 16th and 17th centuries. In the 18th century, there was a conscious attempt to improve the agricultural prosperity of the Lowlands of Scotland, with common land divided and marshland drained for use. These changes also brought about the removal of people from their homes as the small-scale farms and crofts were not viewed as productive enough under the new practices. Former tenants emigrated to towns and cities or further afield, with many of them forced out and their former homes often demolished and ploughed over. Evidence of this can be seen at Easter Earshaig (MDG4985) (**HA5**) and The Knock deserted settlement (SM3489) (**HA64**) where a group of seven buildings and an area of rig and furrow cultivation remains are all that is left of a small settlement whose inhabitants either abandoned or were forced from their homes.
57. Near the end of the 18th century the area famously became home to Scotland's most famous bard, Robert Burns, when he moved to Ellisland Farm (LB4232) (**HA110**) in 1788. The farm is located outside the Study Area to the south west of the Proposed Development and is now a museum. There are seven assets within the Site Boundary that date to the 19th century that show the new landscape formed by the agricultural revolution, all of which relate to this larger scale agricultural activity. The cottages at Donken's (MDG12893) (**HA50**) (Plate 10.1), and Blackcleuch (**HA61**) were newly constructed to take advantage of this activity, and the associated agricultural structures such as the sheepfolds at Clachanbirnie (**HA58**), and Glenkill (**HA63**), the enclosure near Donken's (**HA49**), and the shepherd's cairn at Whitefaulds (**HA45**), all suggest that sheep farming was the main agricultural practice in this part of Dumfriesshire.
58. The changes in agricultural practice also saw the large-scale division of land, evidenced by the boundary walls at Clachanbirnie (**HA53**), which form a small section of a much larger enclosed space on the eastern flank of Brownmoor hill, using the Blackcleuch burn as its eastern edge. The construction of better infrastructure to link the farms with the nearest main towns was also a part of the agricultural improvements, and the Main Rig Drove Road (**HA46**) is evidence of this, leading over the Lowther Hills from Whiteknowes farm and connecting to the village of Durisdeer to the north west, approximately 18km away.



Plate 10.1 View of Donken's Cottage (HA50) with operational Harestanes Windfarm to the north



Plate 10.2 View of Whitefaulds memorial (HA43) with operational Harestanes Windfarm to the north west

10.5.3.5 Modern

59. Into the 20th century the landscape within the Site Boundary would have been similar to that of the preceding century with a gradual decline in agricultural activity, leading to the abandonment of agricultural structures. The higher ground of the Brownmoor Hill and Pumro Fell became ideal locations for the planting of managed woodlands, with this process beginning in the early part of the 20th century, and the entire area being afforested by the 1960's. Around this time, a local man named James Alexander Ferguson was buried at the eastern edge of the Site, with a grave marker and a nearby walkers' cairn erected, known as the Whitefaulds memorial (MDG12895) (**HA43**) (Plate 10.2). The grave and cairn are situated in a clearing within the forestry, having been protected during the latest planting activity.
60. In the 21st century, the operational Harestanes Windfarm development and the need for better infrastructure for modern tree harvesting machinery meant that the Whitefaulds borrow pit or quarry (MDG12895) (**HA44**) was created next to the Whitefaulds memorial (**HA43**), with the quarry still active today. Another modern heritage asset in the forestry on Pumro Fell is a small cairn (**HA56**) that has been created next to a felled tree stump within a firebreak. The cairn of stone partly overlies the tree stump and post-dates the felling earlier in the 21st century.

10.5.3.6 Historic Map Regression

61. The first map to depict part of the Site is the map by Pont (1583-1614), shown in clearer detail on Gordon's later map (Gordon, 1644) produced from Pont's notes (Plate 10.1). This shows the house at Dalswinton to the south east of the Site, along with the Loch of Closeburn, now known as Loch Ettrick, with the map showing a church and associated settlement in this area. Queensberry Hill is annotated and depicted to the north east, and the approximate location of the Site is labelled as 'Pogay Moore'.



Plate 10.1 – Extract from Gordon (1644) showing “*Pogay Moore*” in the location of the Site. Reproduced with the permission of the National Library of Scotland

62. The 18th century maps by Moll (1745) also depict the area as ‘Pogay Moor’ (Plate 10.2), and the slightly later map by Roy (1747-52) shows the settlement of The Knock to the west of the hills, which are devoid of any settlement evidence (Plate 10.3). Into the 19th century the detailed maps by Thomson and Johnson (1820) depict the first farmstead at Glenkill with the Proposed Development to the north, devoid of any other structures (Plate 10.4).



Plate 10.2 – Extract from Moll (1745) showing “*Pogay Moor*” at the location of the Site. Reproduced with the permission of the National Library of Scotland



Plate 10.3 – Extract from Roy (1747-52) showing “*The Knock*” to the west of the Site. Reproduced with the permission of the National Library of Scotland

63. The 1st edition Ordnance Survey (1857) maps are the first to depict Donkens Cottage, Blackcleuch Cottage and the other agricultural features within the Site (Plate 10.5), such as the Clachanbirnie Sheepfold and the Main Rig Drove Road.



Plate 10.4 – Extract from Thomson and Johnson (1820) showing Glenkill Farmstead to the south of the Site. Reproduced with the permission of the National Library of Scotland

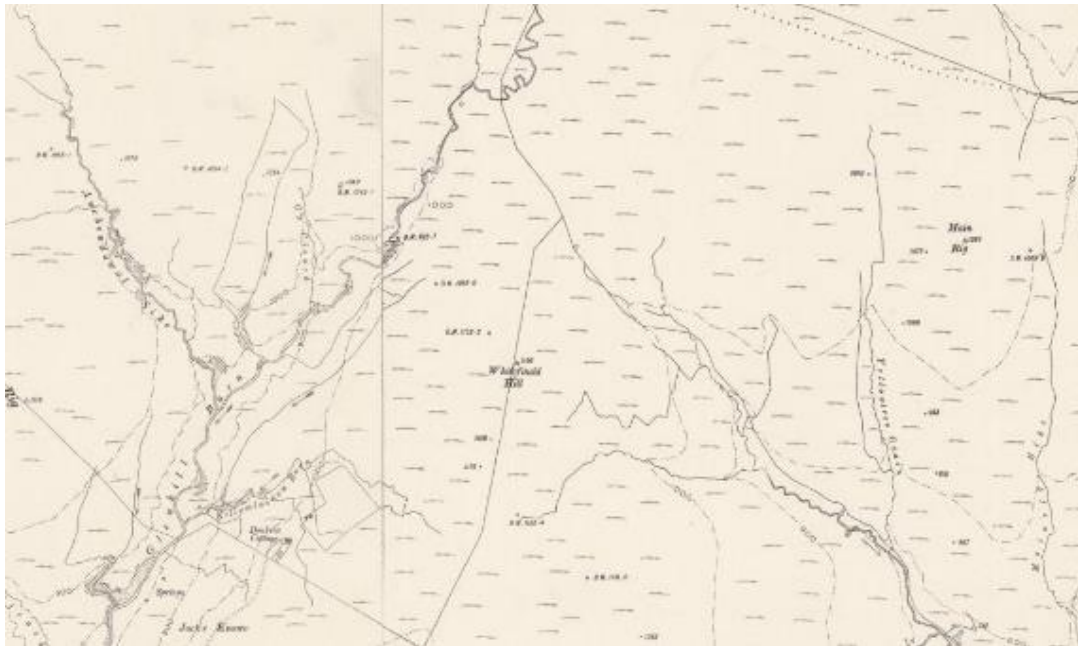


Plate 10.6 – Extract from Ordnance Survey (1898) showing Donken's Cottage and enclosure, the Main Rig Drive Road to the east (dotted line) and several new land divisions. Reproduced with the permission of the National Library of Scotland

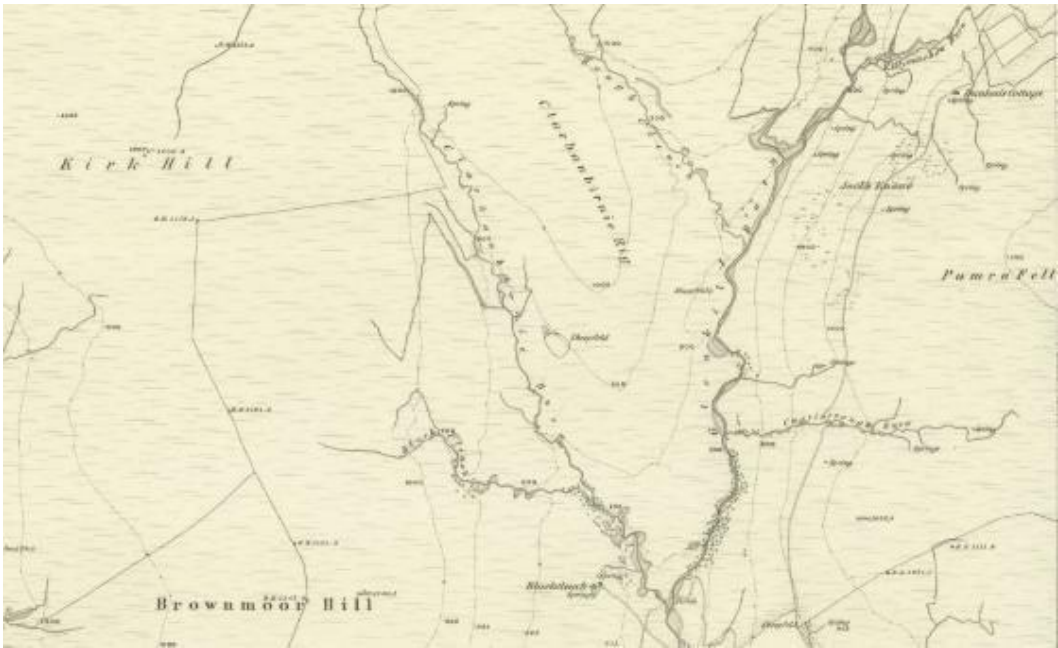


Plate 10.5 – Extract from Ordnance Survey (1857) Donken's Cottage and associated enclosure to the north of Pumro Fell. Reproduced with the permission of the National Library of Scotland

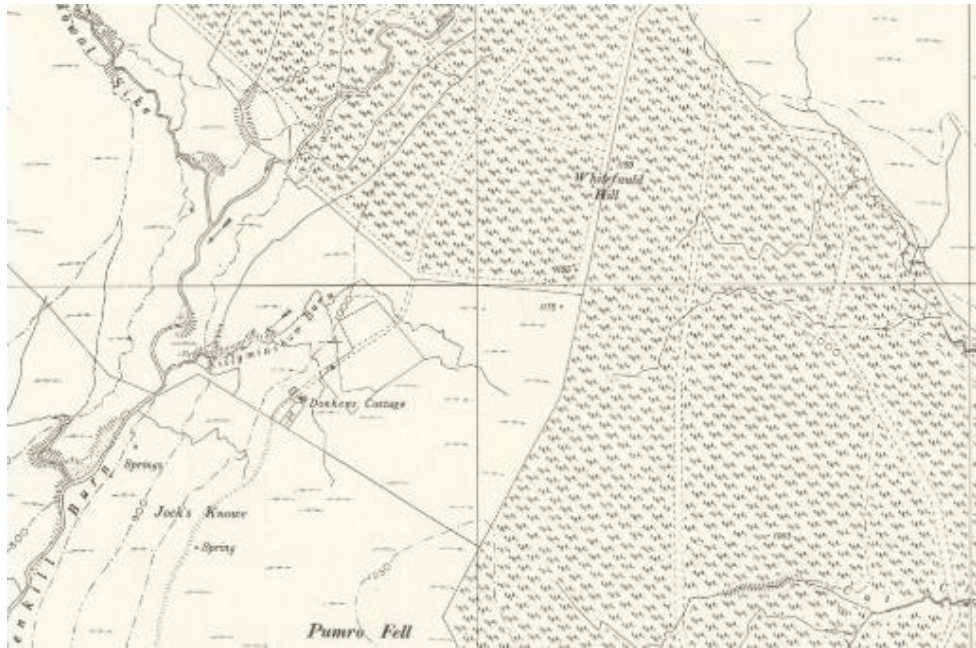


Plate 10.7 – Extract from Ordnance Survey (1957) showing afforestation within the Site Boundary and the beginnings of the Forest of Ae. Reproduced with the permission of the National Library of Scotland

64. The later 19th century Ordnance Survey (1898) map depicts an enlarged Donken's Cottage enclosure, and an increase in land divisions throughout the area (Plate 10.6). By the time of the mid-20th century Ordnance Survey (pre1930 to 1956) map, the area to the east of Donken's Cottage is under a forestry plantation that surrounds Wallaces Fort to the south and continues to the north and west (Plate 10.7).

10.5.3.7 Archaeological Potential

65. The summary of the baseline has identified that the Study Area contains archaeological sites and evidence dating from the Prehistoric to the Modern day. The majority of heritage assets within the Site Boundary relate to Post-Medieval agricultural activity and pastoral farming activities. The previous afforestation of the area has truncated field boundary walls and parts of the other agricultural features. The map regression has shown that the area was labelled as moorland from the 16th century onwards with the only human activity on the fringes.
66. Therefore, given the previous afforestation and the current and historic landscape of the Proposed Development as a moorland on ground that is mainly over 300m above Ordnance Datum, the likelihood of encountering previously unknown archaeological sites or features within the Site is deemed to be very low.

10.6 Potential Effects

67. It is considered that those heritage assets within a relatively close proximity to the Proposed Development may potentially receive a significant effect from direct physical impacts and indirect impacts on their setting. As such, detailed assessments have been undertaken for all assets within the Site Boundary.
68. All heritage assets within the Study Area have been deemed to be of high or medium value as designated heritage assets or undesignated heritage assets of national significance. They all have some degree of theoretical visibility of the Proposed Development, and may potentially receive a significant effect from indirect impacts on the visual setting of the heritage asset. As such, detailed assessments have been undertaken for all heritage assets listed within **Appendix 10.5 Archaeology and Cultural Heritage Gazetteer**.

10.6.1 Mitigation by Design and Embedded Mitigation

69. The preferred option for the mitigation of heritage assets during the design of the Proposed Development is preservation in situ. During the design process, some of the 'embedded mitigation' to achieve this included:
- the sensitive siting of the proposed infrastructure incorporating appropriate buffer distances from environmental receptors to avoid or reduce effects on the environment;
 - re-using existing infrastructure as much as possible to access the Site; and
 - designing tracks to minimise cut and fill.

70. The early identification of heritage assets within the Site Boundary has allowed for avoidance of heritage assets in three locations. The identification of the sheepfold at Clachanbirnie (**HA58**) prior to peat probing allowed the location of this asset to be removed from the proposed borrow pit search area and highlighted its presence close to the edge of an existing track. Similarly, the presence of Donken's Cottage at the edge of the existing track resulted in its consideration when creating access in proximity to this asset. Furthermore, the presence of the Modern memorial to James Ferguson (**HA43**) to the immediate north of the quarry (**HA44**) resulted in the relocation of Turbine 7 further east than the original location to reduce any potential impact on the heritage asset. Retention of the small clearing within which it sits has also formed part of the design, with the proposed borrow pit to the immediate south designed to ensure there are minimal potential impacts.
71. Further 'embedded mitigation' that helps to reduce the visual impact on heritage assets is the consideration given to the appearance, finish and colour of the wind turbines and the control building in accordance with SNH Guidance Siting and Designing Wind Farms in the Landscape (SNH, 2017), allowing for a reduction in the indirect impacts on the setting of heritage assets within the Study Area.

10.6.2 Construction

72. All ground breaking activities associated with the construction of the Proposed Development, in areas of ground that have not previously been impacted upon by intensive forestry activity, ploughing or other historic developments, have the potential to directly impact upon heritage assets. Such activities include, but are not limited to, excavations for turbine bases and crane hard standings, access tracks, cable routes, compounds, and borrow pits. Other activities associated with the construction of the Proposed Development, such as vehicle movements, materials storage, soil and overburden storage, and landscaping, also have the potential to directly impact upon heritage assets.
73. The assessment of construction related effects has been carried out with reference to the layout of the Proposed Development and the locations of the heritage assets as shown on **Figure 10.1 Heritage Assets – Site Boundary**. All of the 12 known heritage assets within the Site Boundary were assessed for indirect impacts, with details of the magnitude of impacts and subsequent significance of effects provided in **Appendix 10.2 Heritage Assets within the Site Boundary**.
74. Three of the known heritage assets identified within the Site Boundary have the potential to be impacted upon during construction as they lie within the construction footprint of various elements of the Proposed Development.
- Whitefaulds Quarry (MDG12895) (**HA44**), a heritage asset of Negligible value due to being of no historic interest, has the potential to be directly impacted by the extension of the existing quarry footprint to the east. As the potential impact would increase the quarry footprint, further extend its use, and help to preserve its limited cultural significance, the magnitude of impact is deemed to be Moderate Beneficial. Therefore, the overall significance of effect has been assessed as **Slight Beneficial**.

- Clachanbirnie Wall (**HA53**), a heritage asset of Negligible value due to its lack of historic interest as a 19th century land division, has the potential to be directly impacted upon by the crane hardstanding and access track to Turbine 1. As only a small proportion of the wall would be removed, resulting in slight alterations, the magnitude of impact is deemed to be Minor Adverse. Therefore, the overall significance of effect before mitigation has been assessed as **Neutral**.
- Pumro Fell Cairn (**HA56**), a heritage asset of Negligible value due to being of no historic interest, has the potential to be directly impacted upon by the creation of a borrow pit in this location. The borrow pit would likely remove the cairn in its entirety and leave it totally altered, as such, the magnitude of impact is deemed to be Major Adverse. Therefore, the overall significance of effect before mitigation has been assessed as **Slight Adverse**.

75. Despite the other assets falling out with the footprints of construction for the Proposed Development as shown in **Figure 10.1 Heritage Assets: Site Boundary**, an element of 'embedded mitigation' for the design and construction of the Proposed Development has the potential to introduce direct physical impacts on a further two heritage assets. Embedded mitigation during construction contains a provision for up to 50m micro-siting of infrastructure to ensure the best possible location is chosen based on Site investigations. There are four heritage assets within the 50m micro-siting buffer surrounding the access tracks and borrow pits that have the potential to be impacted upon during construction:

- Whitefaulds Shepherd's Cairn (**HA45**), a heritage asset of Low value due to its local importance, has the potential to be directly impacted upon by a borrow pit, and may be totally altered. The magnitude of impact is deemed to be Major Adverse, therefore the overall significance of effect before mitigation has been assessed as **Slight Adverse**.
- Donken's Cottage Enclosure (**HA49**), a heritage asset of Low value due to its local importance, has the potential to be directly impacted upon by access tracks leading to Turbine 3. The magnitude of any impact upon the enclosure remains is deemed to be Minor Adverse as the heritage asset would only be slightly altered, therefore the overall significance of effect before mitigation has been assessed as **Slight Adverse**.
- Donken's Cottage (MDG12893) (**HA50**), a heritage asset of Low value due to its local importance, has the potential to be directly impacted upon by access tracks leading to Turbine 3, and may be totally altered. The magnitude of impact is deemed to be Major Adverse, therefore the overall significance of effect before mitigation has been assessed as **Moderate Adverse**.
- Clachanbirnie Sheepfold (**HA58**), a heritage asset of Low value due to its local importance, has the potential to be directly impacted upon by a borrow pit, and may be slightly altered. The magnitude of impact is deemed to be Minor Adverse, therefore the overall significance of effect before mitigation has been assessed as **Slight Adverse**.

76. As well as the effects on known heritage assets, there is also the potential for direct impacts on currently unknown, subsurface archaeological remains. The magnitude of impact on any archaeological remains encountered is deemed to be Major Adverse as they would require complete excavation and recording prior to destruction by the construction activities. As the potential for encountering archaeological remains is thought to be low, and the value of the known heritage assets within the Site Boundary is Low or Negligible, the overall significance of effect on currently unknown heritage assets is assessed as **Slight Adverse**.

10.6.3 Operation

77. The Proposed Development has the potential to indirectly impact upon heritage assets within the Site Boundary and the Study Area. The assessment of operational impacts and effects on the setting of heritage assets has been carried out with reference to the turbine layout and locations of heritage assets shown on **Figure 10.2 Heritage Assets: Study Area**. The assessments were supported by photomontages, wireframes and computer modelling prepared in support of **Chapter 5 Landscape and Visual**.
78. A number of viewpoints are listed in **Table 10.6**, to evaluate potential indirect impacts of the proposals on the setting of heritage assets that were identified in consultation with HES. **Table 10.6 Summary of Heritage Asset Viewpoints** provides details on specific archaeology and cultural heritage viewpoints which are detailed on **Figure 10.4: Viewpoints**. Further viewpoints are referenced within **Chapter 5 Landscape and Visual**.

Site	Site Name	View Point type	View Point Number	Figure Number	Easting/Northing
HA42	Raehills GDL	This viewpoint is located on the A701, at one of the access points to Raehills. It is one of the few locations along this wooded stretch of the A701 that gives an opportunity to view beyond the immediate road edge. The ground descends steeply to the Kinnel Water valley, the course of which is delineated in the view by the broadleaved woodland. Small fields of pasture lie between the viewpoint and the river separated by post and wire fencing and stone tracks. The upper floor of the three storey Raehills House can just be glimpsed through the woodland set against a backdrop of more broadleaved woodland, with the foothills behind. The commercial forestry on the foothills is visible to the south, with grass moorland on the hilltops to the north. The woodland planting associated with the Raehills estate is the main feature of the view and disguises the landform and partially screens the foothills on the skyline. Minnygap wind turbines are visible on the skyline to the north west, with some turbine blades of the operational Harestanes Windfarm visible behind and further to the west.	VP4	Figure 5.14	307107, 594461
NA	Drumlanrig Castle	This viewpoint is representative of the views from Drumlanrig Castle and gardens. Much of the estate is enclosed by large mature trees and woodland in addition to the landform, but there is potential for framed and glimpsed views out to the wider foothills and uplands beyond to the south east. Dalswinton Windfarm is visible above the skyline to the south east but not prominent. The wireline illustrates that only the blades of three of the proposed turbines would be potentially seen from this viewpoint, and likely further obscured by forestry. Due to the significant distances and the results from the visualisation, this asset has been scoped out from further assessment.	VP13	Figure 5.23	285505, 599078
NA	Burnswark Hill Roman Fort	This viewpoint is located on the summit of Burnswark Hill, noted for its Roman Fort and other archaeological features. 360 degree long distant panoramic views are available. To the south and south east, this includes views across the settled dales to the Solway Firth and Lake District beyond. Minsca Windfarm lies very close (c.3km) to the east of the summit with Ewehill Windfarm visible 10km from the viewpoint. The in-construction Solwaybank Windfarm can be seen to the south. To the north, the Southern Uplands are notable rising out of the settled dales. Clyde Windfarm is just discernible in the distance, between the Moffat Hills and the Lowther Hills to	VP20	Figure 5.30	318518, 578624

Site	Site Name	View Point type	View Point Number	Figure Number	Easting/Northing
		the north. Queensberry is clear on the skyline beyond the settled Annandale area. The operational Harestanes and Minnygap Windfarms on the foothills are noticeable against the backdrop of the uplands. Further to the west on the foothills, Dalswinton Windfarm can be seen just above the settled dales, against the more distant uplands. The Annandale and Nithsdale settled areas occupy the majority of the view with layers of distant foothills and uplands as the backdrop. Blackcraig and Wether Hill Windfarms can just be seen to the south west on the distant uplands. The Proposed Development would appear within the operational Harestanes array, with hub heights similar to the existing turbines, but blades would be more visible above the skyline. The Proposed Development would increase the density of turbines seen but appear very much as part of the existing windfarm within this very small proportion of the overall view available. Due to the significant distances and the results from the visualisation, this asset has been scoped out from further assessment.			
HA66	Wallace's House, fort	This viewpoint is located in the central portion of the Scheduled Monument within a clearing in the surrounding commercial forestry. The fort remains one of the few locations that does not retain significant tree cover. The ground descends steeply on all sides, with cliffs leading to the promontory or confluence of the Torr Linn and Black Linn burns. Open views are to the east along the river valley, with the potential intervisibility with the forts at Maggiemauts Knowe and Davies Kirk. The wireline illustrates that only the blades of two of the proposed turbines would be potentially seen from this viewpoint, and likely further obscured by forestry.	VP22	Figure 10.5	303435, 590842
HA64	The Knock, Deserted Settlement	This viewpoint is located in the central portion of the Scheduled Monument on the level and tree-less top of a grassy ridge. The immediate topography dips sharply to the west, with steep tree covered slopes descending to the Garrel Water. Views further afield to the west and north west are dominated by the presence of commercial forestry plantation with the presence of the existing infrastructure associated with the operational Harestanes Windfarm beyond. From this viewpoint, the wireline illustrates that the Proposed Development would not be visible in view. An additional viewpoint has been included	VP23	Figure 10.6	303973, 591177

Site	Site Name	View Point type	View Point Number	Figure Number	Easting/Northing
		to present the visibility from the edges of the Scheduled Monument (VP24).			
HA64	The Knock, Deserted Settlement	This viewpoint is located on the western periphery of the Scheduled Monument on the level and treeless top of a grassy ridge. The immediate topography dips sharply to the west, with steep tree covered slopes descending to the Garrel Water. Views further afield to the west and north west are dominated by the presence of commercial forestry plantation with the presence of the existing infrastructure associated with the operational Harestanes Windfarm beyond. The wireline shows that the Proposed Development would add to this array and appear as part of the existing windfarm within this very small proportion of the overall view available.	VP24	Figure 10.7	303925, 591208
HA98	Spedlin's Tower	This viewpoint is located on the central point of Spedlin's Tower which sits within a small parkland of mature woodland with views extending across pasture and wider woodland plantation. Picturesque views are available to the south west over the designed gardens and to the north towards the river and the adjacent designed landscape of Jardine Hall. The operational Harestanes and Minnygap Windfarms on the foothills are noticeable against the backdrop of commercial forestry plantation. The wireline shows that from this location, the Proposed Development would add to this array and appear as part of the existing windfarm within this distant view.	VP25	Figure 10.8	309767, 587553
HA110	Ellisland Farm	This viewpoint is located to the west of the farmhouse, located in the west end of the carpark area adjacent to the drive. There appear to be limited views of the the Proposed Development from the approach drive to Ellisland. The farm is surrounded by managed farmland including areas of cultivation and grazing reflecting its rural farming character. To the east of the property a thin band of mature trees follows the river edges providing picturesque views as a backdrop to the building. The Proposed Development lies around 11.2km to the north west, beyond an active landscape comprising dispersed structures and infrastructure alongside pockets of medium to large scale commercial forestry plantation. The wireline has been included to present this lack of visibility,	VP26	Figure 10.9	292911, 583817

Table 10.6: Summary of Heritage Asset Viewpoints

79. All of the 116 heritage assets within the baseline were assessed for indirect impacts, with details of the magnitude of impacts and subsequent significance of effects provided in **Appendix 10.2 Heritage Assets within the Site Boundary**, **Appendix 10.3 Heritage Assets within 5km of the Turbine Locations**, and **Appendix 10.4 Heritage Assets between 5km and 10km of the Turbine Locations**.
80. After mitigation related to direct impacts from construction, of the 116 heritage assets within the baseline, 47 were assessed as having a **Neutral** Significance of effect, 68 were assessed as having a **Slight Adverse** significance of effect, and a single asset was identified as having a **Slight Beneficial** significance of effect..
81. The following discussion has been lifted from the appendices and addresses those assets identified by HES during the scoping response that are located within close proximity to the Site Boundary, alongside a selection of other heritage assets that represent the various designations within the baseline. Of the heritage assets highlighted by HES, due to the significant distances from the World Heritage Site, intervening terrain and infrastructure, Hadrian's Wall has been scoped out of further assessment as it lies beyond 30km from the Proposed Development.
82. Due to the distances from the Proposed Development and intervening vegetation, the following have been scoped-out of further assessment:
 - Drumlanrig Castle (LB3886); and
 - Drumlanrig Castle Garden and Designed Landscape (GDL00143).
83. The following have been scoped-out of further assessment as they are not within the ZTV of the Proposed Development:
 - Maxwellton (Glencairn Castle) Garden and Designed Landscape (GDL00276); and
 - Raehills House (LB9898).
- 10.6.3.1 Nether Dod Cairns (MDG6418) (HA35)**
84. The cairns are currently set on the northern edge of the summit of Big Knowe, with immediate open views within a small pocket of hillside which lacks commercial plantation. The summit commands views in all directions, with some larger hills to the north at Nether Dod and Killyminshaw Hill to the north west. The topography to the west dips steeply towards the Capel Water.
85. The cairns current views are dominated in the first instance by the presence of significant large scale commercial forestry operations associated with the Forest of Ae. The hills to the north appear afforested, with small pockets of upland to the north east and east.
86. Views to the south east incorporate the operational Harestanes Windfarm. The additional blade tips and hubs would be in the background of the current infrastructure with significant localised topography and screening likely to impact on these views. The magnitude of impact has been assessed as No Change to an asset of High value, with no changes to setting with the introduction of additional blade tips and hubs in views to the south east. As such the significance of effect has been assessed as **Neutral**.
- 10.6.3.2 Ogle Linn Earthwork (SM10497) (HA36)**
87. The remains of this earthwork are located in an upland area on the edge of the Ogle Linn adjacent to the site of an old drove road. The immediate area to the south and east appears to contain recently felled commercial forestry plantation with the site itself located within an active and fluid area of tree planting/felling. Key views associated with the possible defensive location may relate to views north east down the Ogle Lin valley. Infrastructure from the operational Harestanes Windfarm may be visible in gaps in the topography to the west.
88. Due to the distances involved and intervening localised screening from landform and tree cover, the magnitude of impact has been assessed as Negligible Adverse to an asset of High value, with very minor changes to setting, with the potential introduction of additional turbine blades and hubs to the south west.
89. These views are already partially screened by localised topography and commercial forestry plantation. Any changes from the Proposed Development would be unlikely to affect the ability to understand and appreciate the heritage asset and its key views. As a result, the significance of effect has been assessed as **Slight Adverse**.
- 10.6.3.3 Raehills (GDL00322) (HA42)**
90. The Garden and Designed Landscape is located to the east of the Forest of Ae, and straddles both sides of the current A701. The immediate landscape surrounding the Garden and Designed Landscape contains a mix of large

scale commercial forestry plantation immediately to the east and west, which includes the larger Hazelbank, Edwards Rig, and Moss plantations, supplemented by smaller woods such as Mollinhead and Barntimpen. Further afield to the south, the landscape opens up to the wider flood plain of the Kinnel Water and its many tributaries. In these areas the landscape is dominated by agriculture and dispersed settlement and structures.

91. The interior of the Garden and Designed Landscape surrounds a number of high and low areas of ground, with the Kinnel Water and its tributaries creating picturesque and attractive views towards the gorges and steep rock cut valleys. Higher ground allows for extensive views to the east, with the focus on views between a number of policy buildings and the main Raehills House. This is set against a backdrop of mature planted trees and gardens to the rear of the property. Key views from the house are directed east, across the picturesque Kinnel Water, and the designed gardens that have been established within its wider policies. Key views towards the building from its approach to the south present a grand and dominating structure, back clothed by mature trees and gardens. Large areas of commercial forestry plantation extend beyond this with pockets of dispersed harvesting and planting towards the core of the Forest of Ae.
 92. A wireframe has been produced, VP4 (**Figure 5.14**), illustrating that the majority of the towers, hubs and blades of T5 – T8 would be seen on the skyline, with the hub and blades of T4, the blade tip of T1, and half the blades length of T2 and T3. The visualisation illustrates that the foreground woodland would screen the majority of blades of T1, T2, T3, and hub of T4, so only the four turbines (T5-T8) would be noticeable appearing from behind the skyline.
 93. These peripheral and distant views from within open and elevated areas looking to the west incorporate the large scale commercial forestry plantation and the operational Harestanes Windfarm. The additional blade tips and hubs would only be visible from the higher ground along the eastern edge of the policies and would be backdropped against the current infrastructure with significant localised topography and screening likely to impact on these views. The magnitude of impact has been assessed as Minor Adverse to an asset of High value, with slight changes to setting with the introduction of both blade tips and hubs in distant views to the west from the A701. These changes are unlikely to impact on the ability to understand and appreciate the Garden and Designed Landscape, its extensive policies and structures, and any internal associations between structures within the wider estate. As such the significance of effect has been assessed as **Slight Adverse**.
- 10.6.3.4 Tanner's Linn Earthwork (SM10533) (HA52)**
94. The earthwork is located on the cliffs overlooking the north side of the Tanner's Linn. The defensive earthwork is enclosed by woodland that surrounds the watercourse to the south and commercial forestry plantation to the north and north east. Open pasture to the west opens up to higher ground and further commercial plantation.
 95. The earthwork or forts defensive position consists of steep sided approaches to the south near to the confluence of the Tanners Linn and Molling Burn. The earthwork does not appear to be contemporary with similar defensive sites to the south east, including Davie's Kirk (SM3299) and Maggiemauts Knowe (SM3488). However, there is ambiguity surrounding the dates, and as such direct visual links with these assets to the south west cannot be ruled out as important aspects of the earthworks setting.
 96. The introduction of additional blade tips and hubs would only be visible from the northern portion of the earthworks with intervening vegetation likely to provide elements of screening. There would be no impact on the key views to the south or south east, resulting in very minor changes to its setting. As a result, the magnitude of impact has been assessed as Negligible Adverse to an asset of High value. The significance of effect has therefore been assessed as **Slight Adverse**.

10.6.3.5 Davie's Kirk Hill Fort (SM3299) (HA59)

97. The hillfort is located on a small rise in local topography with steep sided approaches to the north and east. The site commands views in all directions, with open and expansive views to the east and south east where the topography drops to form the flood plain for the Garrel Burn and Kinnel Water. The site is surrounded by small areas of managed woodland, with open upland pasture and felled commercial forestry plantation to the north.
98. The forts defensive position consists of steep sided approaches to the south and it may have direct visual links and be contemporary with sites to the south at Maggiemauts Knowe (SM3488) and south west at Wallace's Fort (SM604). Views from the asset to the north west are dominated by the presence of commercial forestry plantations.
99. The introduction of blade tips to the north west would likely be imperceptible given the intervening vegetation resulting in no changes to the setting of the fort. As a result, the magnitude of impact has been assessed as No Change to an asset of High value. The significance of effect has therefore been assessed as **Neutral**.

10.6.3.6 Maggiemauts Knowe (SM3488) (HA62)

100. The remains of this hillfort are located on a steep sided hillock with a small body of freshwater at its south west side. It is unclear but this small water body may have been the result of more recent quarrying as is not visible on map regression. The forts defensive position contains steep sided approaches to the south with higher ground to the north across the Mill Burn. It may have direct visual links and be contemporary with sites to the north at Davie's Kirk Hill Fort (SM3299) and to the south east to Wallace's Hill Fort (SM604). Views from the asset to the north west are dominated by the presence of commercial forestry plantation. Intervening local topography and tree cover also impact on reciprocal links from the adjacent hill forts, however visibility remains in part.
101. The introduction of blade tips from a single turbine would only be visible from a small central location within the fort, and would likely be imperceptible given intervening vegetation, resulting in no changes to the forts setting. As a result, the magnitude of impact has been assessed as No Change to an asset of High value. The significance of effect has therefore been assessed as **Neutral**.

10.6.3.7 The Knock Deserted Settlement (SM3489) (HA64)

102. The deserted settlement is located on the level top of a gentle grassy ridge. The topography dips sharply to the west, with steep tree covered slopes leading down to the Garrel Water. Open pasture extends to the north and east, with dispersed structures and roads/tracks with views towards the reservoir to the east. Views further afield to the west and north west are dominated by the presence of commercial forestry plantation with the presence of the existing infrastructure associated with the operational Harestanes Windfarm beyond. Key and open views within and from the settlement appear to relate to the extensive views to the east and south, where the topography dips and allows open aspects across the flood plains and tributaries. Views to the north west from the higher ground along the western edge overlook the Garrel water valley and absorb the presence of active commercial plantation with elements of infrastructure present from the operational Harestanes Windfarm.
103. Two wireframes have been produced, VP23 (**Figure 10.5**) and VP24 (**Figure 10.6**). The first illustrates that over a large portion of the Scheduled Monument, the towers, hubs and blades would not be visible and obscured by current landform. The second wireframe produced displays the visibility of the Proposed Development from the western periphery of the settlement, with T1 and T2 not visible, and the blade tips of T3 and T4 to the rear of views. The hubs and blades of T5-T8 would be visible appearing as part of the existing windfarm with the presence of the infrastructure associated with the operational Harestanes Windfarm beyond. This again reflects a small portion of the overall views available from the monument.
104. The introduction of additional blade tips and hubs would be visible from the western edge of the settlement with the commercial forestry plantation in the immediate foreground and the existing windfarm infrastructure beyond. These impacts would result in very minor changes to the setting with no key views affected by the addition of a number of hubs. It is likely that these visual impacts would be partly screened by intervening vegetation and absorbed against the existing background. As a result, the magnitude of impact has been assessed as Negligible Adverse to an asset of High value. The significance of effect has therefore been assessed as **Slight Adverse**.

10.6.3.8 Wallace's House, fort (SM604) (HA66)

105. The fort is located on the edge of a commercial forestry plantation, on a steep sided promontory at the confluence of the Torr Linn and Black Linn burns. Its position falls within a small clearing and it retains immediate and distant views to the south and east in part due to the steep river cliffs and the lack of vegetation or topographic screening, and the land opening up to the Kinnel Water floodplain. The topography from the west and north increases, with the summits of Kirkmichael Fell and Pumro Fell. Key and open views/vistas outward from the fort relate to defensive views to the east along the river valley, with some filtered views to the north east include possible visual links or intervisibility with the forts at Maggiemauts Knowe and Davie's Kirk. It should be noted that some of the immediate views are currently partially filtered by commercial plantation and immediate localised topography.
106. A wireframe has been produced, VP4 (**Figure 5.14**), illustrating that the majority of the towers, hubs and blades of T1, T2, T4 and T6–T8) would not be visible, with only half the blade length of T5, and the blade tip of T3 visible. Intervening commercial plantation would likely filter these views. The magnitude of impact has been assessed as Negligible Adverse to an asset of High value, with very minor changes to setting with the introduction of both blade tips and hubs in views to the north and north west in the context of commercial forestry. Intervening and localised topography and vegetation would have some impact on these views. The changes would be unlikely to impact on the ability to understand and appreciate the heritage asset and its extensive views to the south and east. As such the significance of effect has been assessed as **Slight Adverse**.

10.6.3.9 Ross Mains (LB10353) (HA82)

107. The country house is located on a rise at the western edge of the Kinnel Water and the current setting falls within a landscape of arable and pastoral agriculture with pockets of mature trees and managed woodland. Key views are likely to the south and east where the house enjoys open views to the kennel water and the adjacent agricultural fields. Large farm buildings and small areas of woodland are to the immediate north. Peripheral and distant views to the north west incorporate the large scale commercial forestry plantation and the operational Harestanes Windfarm. The additional visibility of blade tips and hubs would be backdropped against the current infrastructure with significant localised topography and screening likely to impact on these views.

108. The magnitude of impact has been assessed as Negligible Adverse to an asset of High value, with very minor changes to setting with the introduction of both blade tips and hubs in distant views to the north west in the context of commercial forestry and the operational Harestanes Windfarm. Intervening and localised infrastructure and vegetation would have significant impacts on these views. These changes are unlikely to impact on the ability to understand and appreciate the fabric and nature of the country house. As such the significance of effect has been assessed as **Slight Adverse**.

10.6.3.10 Whitestanes Moor ASA (HA84)

109. The ASA is located to the south east of the Forest of Ae, on the slopes of Whitestanes Moor, and identifies an area of upland which appears to have avoided inclusion of commercial forestry. The low slopes provide expansive views in all directions, with peripheral and distant views to the north and north east, dominated by the presence of the Forest of Ae and the commercial plantation which covers the hills and extends beyond. This commercial aspect also stretches south down the western periphery of the ASA, with the presence of the operational Dalswinton Windfarm beyond. Key views relate to the intervisibility of the known heritage assets within the ASA and views outward from the hillside to the north and south along the Water of Ae. Distant views to the north east through to the west are dominated by the presence of commercial forestry plantation, the Forest of Ae, with the existing infrastructure associated with both the operational Harestanes Windfarm and Dalswinton Windfarm visible.

110. The introduction of blade tips and hubs would only be visible from the higher ground along the eastern edge of the ASA. The magnitude of impact has been assessed as Minor Adverse to an asset of High value, with slight changes to setting with the introduction of both blade tips and hubs in distant views to the north east in the context of commercial forestry and the operational Harestanes Windfarm. Intervening and localised topography and vegetation may have some impact on these views. These changes are unlikely to impact on the ability to understand and appreciate the ASA and its extensive views. As such the significance of effect has been assessed as **Slight Adverse**.

10.6.3.11 Barony College (MDG25645) (HA99)

111. The non-inventory Garden and Designed Landscape is located to the south of the hamlet of Parkgate, to the south east of the A701. The undulating land to the south and south east leads to the mature banks which enclose the Water of Ae. The gardens to the west of the house comprise open lawn backdropped by mature planted woodland which surrounds a small body of water. The walled garden to the south is enclosed and filtered by mature trees. Extensive views towards the Water of Ae are dominated by agricultural land. Key views relate to intervisibility between the various buildings and designed aspects within the landscape, and views towards the area from outside.

112. Views to the north towards the Proposed Development are characterised with the presence of dispersed settlement and infrastructure with peripheral and distant views dominated by the presence of commercial forestry plantation. Views to the north west may also incorporate the presence of the Dalswinton Windfarm.

113. The introduction of blade tips and hubs in peripheral views to the north would be screened by localised structures, topography and vegetation. The magnitude of impact has been assessed as Minor Adverse to an asset of High value, with slight changes to setting with the introduction of blade tips and hubs in views to the north. These changes are unlikely to impact on the ability to understand and appreciate the non-inventory Garden and Designed Landscape and its association with the walled garden and house. As such the significance of effect has been assessed as **Slight Adverse**.

10.6.3.12 Elshieleshields Tower (LB9970) (HA104)

114. The tower, adjoining house, walled garden and gatepiers are located on the eastern edge of a tributary for the Kinnel Water and the current setting falls within an area of mature woodland plantation with open aspects and key views to the south. Peripheral and distant views to the north west would be screened by the adjacent woodland but beyond this would incorporate the large scale commercial forestry plantation and the operational Harestanes

Windfarm. The additional blade tips and hubs would be screened by the current vegetation but where views may be possible would be backdropped against the current infrastructure with localised topography and screening likely to impact on these views.

115. The magnitude of impact has been assessed as No Change to an asset of High value, with no changes to setting with the introduction of blade tips and hubs in distant views to the north west screened by localised vegetation surrounding the tower and any filtered views backdropped by the operational Harestanes Windfarm. As such the significance of effect has been assessed as **Neutral**.

10.6.3.13 Trailflat Pit Defined Enclosure (MDG8860) (HA105)

116. The pit enclosure is located to the south of a wide meander on the Water of Ae flood plain, adjacent to the structures and infrastructure associated with Trailflat Farm to the north west. It sits within an active agricultural landscape, with arable fields and improved pasture extending in immediate views from the enclosure in all directions. Pockets of dispersed structures and settlement, alongside small areas of commercial forestry plantation are absorbed and incorporated into these views. Key views likely relate to reciprocal views to the barrows and other features within the adjacent fields.

117. Immediate views to the north west include the farm infrastructure, with peripheral and distant views incorporating the large scale commercial forestry plantation and the operational Harestanes Windfarm. The additional blade tips and hubs would be partly absorbed by the current infrastructure with localised vegetation likely to impact on these views.

118. The magnitude of impact has been assessed as Minor Adverse to an asset of High value, with slight changes to setting with the introduction of blade tips and hubs in distant, filtered views to the north west. These additions are unlikely to impact on the ability to understand and appreciate the enclosure, its associations with adjacent Prehistoric ritual and funerary activity and its extensive views across the flood plains associated with the Water of Ae. As such the significance of effect has been assessed as **Slight Adverse**.

10.6.3.14 Ellisland Farm (LB4232) (HA110)

119. The farm is currently located on the banks of the River Nith to the south east of the village of Auldgirth. The farm is set within the flat flood plain of the river, surrounded by managed farmland including areas of cultivation and grazing reflecting its rural farming character. To the east of the property a thin band of mature trees follows the river edges providing picturesque views as a backdrop to the building.

120. The main driveway approaches the property from the west, direct from the current A96, through a small coppice of mature trees where the track opens up on either side to long views north, east and south east across the farmland. The Proposed Development lies around 11.2km to the north west, beyond an active landscape comprising dispersed structures and infrastructure alongside pockets of medium to large scale commercial forestry plantation.

121. A wireframe has been produced, VP26 (**Figure 10.9**), illustrating that the majority of towers, hubs and blades would be obscured from view by the existing terrain. The tips of T1 and T5 would be visible on the skyline, however likely to be imperceptible.

122. Distant and peripheral views towards the Proposed Development are dominated by extensive commercial forestry plantation on the hills to the north east stretching into the northern portions of the Forest of Ae. The introduction of blade tips, around 11km to the north east would be imperceptible with the large distances involved and significant intervening localised vegetation.

123. The magnitude of impact has been assessed as No Change to an asset of High value, with no changes to setting with the introduction of blade tips in the context of commercial forestry. As such the significance of effect has been assessed as **Neutral**.

10.6.3.15 Amisfield Tower (LB17233) (HA112)

124. The tower is located to the west of the A701, north of Locharbriggs, at the base of a small hill that shields views to the east. Its current setting is within a garden and designed landscape surrounding the tower, consisting of parkland and mature woodland. The tower holds more open views to the south and north west through gaps in the woodland. Peripheral and distant views to the north west would be filtered by the adjacent woodland, but would incorporate the large scale commercial forestry plantation and the operational Harestanes Windfarm. The additional blade tips and hubs would be backdropped against the current infrastructure with significant localised vegetation likely to impact on these views.

125. The magnitude of impact has been assessed as No Change to an asset of High value, with no changes to setting as the introduction of blade tips and hubs in filtered views to the north west in the context of current infrastructure from the operational Harestanes Windfarm. As such the significance of effect has been assessed as **Neutral**.
- 10.6.3.16 Cowhill Tower (GDL00109) (HA116)**
126. The River Nith forms the north-east boundary of the policies and the site of the original Borders tower was almost certainly chosen for its defensive position. The house is set above the river with extensive views along the valley to north-west and south-east. When clear, the views to the south west extend to the hills of the Lake District. Views to the south and south east, into the designed landscape from the house are key elements of the setting but are limited by the policy woodlands which are themselves a feature in the surrounding flat landscape.
127. The house is set on higher ground above the river whose course has been altered and straightened to the north of the house and views across the flood plain incorporate local farms and other infrastructure. To the south east of the present mansion lie the remains of an earlier fortified tower also known as Cowhill Tower. The designed landscape is enclosed by the policy woodlands and extends southwards along the drive to the minor access road which links with the A76(T) to Dumfries. Distant and peripheral views towards the Proposed Development are dominated by extensive commercial forestry plantation stretching into the northern portions of the Forest of Ae. The introduction of blade tips and hubs, around 10.9km to the north east would be filtered and screened by localised vegetation in many parts of the designed landscape making them imperceptible with the large distances involved.
128. The magnitude of impact has been assessed as Negligible Adverse to an asset of High value, with very minor changes to setting with the introduction of blade tips and hubs in filtered and screened views from within the designed landscape. Intervening and localised vegetation would have some impact on these views. These changes are unlikely to impact on the ability to understand and appreciate the historical associations with the Garden and Designed Landscape and its visual relationships with its policies and picturesque views along the River Nith. As such the significance of effect has been assessed as **Slight Adverse**.

10.7 Mitigation

10.7.1 Construction

To mitigate the identified physical impacts on known cultural heritage assets described in **Section 10.6.2 Construction**, a programme of archaeological works would be implemented in consultation with the Dumfries and Galloway Council Archaeologist. A summary of the proposed mitigation is presented in **Table 10.7**.

ID	Description
CH1	<p>Site Demarcation and Avoidance</p> <p>Surviving heritage assets that are within 50m of any proposed turbine base, access track, borrow pit, or crane hardstanding would be demarcated prior to the commencement of construction to ensure visibility of the heritage asset location to all members of the construction crew. Demarcation would be achieved using high visibility marker posts set 5m from the edge of the heritage asset, with the markers retained throughout the construction phase. Demarcation of heritage assets would be the responsibility of the Principal Contractor, with identification of the heritage assets made on the ground by a qualified archaeologist using the baseline information provided in Appendix 10.5 Archaeology and Cultural Heritage Gazetteer.</p> <p>The heritage assets to be demarcated include:</p> <ul style="list-style-type: none">Whitefaulds Shepherd's Cairn (<i>HA45</i>)Donken's Cottage Enclosure (<i>HA49</i>)Donken's Cottage (<i>HA50</i>)Clachanbirnie Sheepfold (<i>HA58</i>)

ID	Description
CH2	<p>Archaeological Recording (Basic Recording (ALGAO, 2013))</p> <p>Any surviving upstanding structural heritage assets that are likely to be truncated or wholly removed by the Proposed Development would be recorded prior to construction to allow for the creation of a permanent record of the heritage asset and its preservation by record.</p> <p>The heritage asset to be recorded prior to construction includes:</p> <ul style="list-style-type: none">Clachanbirnie wall (<i>HA53</i>)Pumro Fell Cairn (<i>HA56</i>)
CH3	<p>Construction Guidelines</p> <p>Written guidelines would be issued for use by all construction contractors outlining the need to avoid causing unnecessary damage to known heritage assets. The guidelines would set out arrangements for calling upon retained professional support in the event that buried archaeological remains (such as building remains, human remains, artefacts etc.) should be discovered in areas not subject to archaeological monitoring.</p> <p>The guidelines would make clear the legal responsibilities placed upon those who disturb artefacts or human remains.</p>

Table 10.7: Archaeology and Cultural Heritage Mitigation

10.7.2 Operation

129. The nature of the Proposed Development does not allow for any form of permanent mitigation to be implemented within the Site Boundary that would reduce the indirect impact on the setting of the heritage assets within the Study Area, and therefore the significance of effect.

10.8 Residual Effects

10.8.1 Construction

130. During the construction of the Proposed Development, the implementation of the mitigation measures summarised in **Table 10.7** would avoid or reduce the impact on any heritage assets within the Site Boundary. Once the proposed mitigation is taken into account, any residual effects arising from the construction of the Proposed Development in relation to direct effects on heritage assets would be no greater than **Slight Adverse**. A summary of the predicted effects before mitigation, the mitigation recommended, and the residual effects after mitigation for heritage assets with the potential to be directly impacted by the construction activities is shown in **Table 10.8**.

Description of effect	Pre-mitigation Effect		Mitigation Measure	Residual Effect	
	Magnitude	Significance		Magnitude	Significance
During Construction					
Direct impact on Whitefaulds Quarry (HA44)	Moderate Beneficial	Slight Beneficial	None required	Moderate Beneficial	Slight Beneficial
Potential direct impact on Whitefaulds Shepherd's Cairn (HA45)	Major Adverse	Slight Adverse	Site demarcation and avoidance	Minor Adverse	Neutral

Description of effect	Pre-mitigation Effect		Mitigation Measure	Residual Effect	
	Magnitude	Significance		Magnitude	Significance
Potential direct impact on Donken's Cottage Enclosure (HA49)	Minor Adverse	Slight Adverse	Site demarcation and avoidance	Negligible Adverse	Neutral
Potential direct impact on Donken's Cottage (HA50)	Major Adverse	Moderate Adverse	Site demarcation and avoidance	Negligible Adverse	Neutral
Direct impact on Clachanbirnie Wall (HA53)	Minor Adverse	Slight Adverse	Historic Building Recording	Negligible Adverse	Neutral
Direct impact on Pumro Fell Cairn (HA56)	Major Adverse	Slight Adverse	Earthwork Survey	Minor Adverse	Neutral
Potential direct impact on Clachanbirnie Sheepfold (HA58)	Minor Adverse	Slight Adverse	Site demarcation and avoidance	Minor Adverse	Neutral

Table 10.8: Residual Effects

10.8.2 Operation

131. The residual effects of the Proposed Development on the settings of heritage assets in the Study Area would be the same as the predicted effects. Of the 116 heritage assets within the baseline, 47 were assessed as having a **Neutral** Significance of effect, 68 were assessed as having a **Slight Adverse** significance of effect, and a single asset was identified as having a **Slight Beneficial** significance of effect.

10.9 Cumulative Assessment

10.9.1 Construction

132. The assets affected by the construction of the Proposed Development do not have any common receptors with assets that have the potential to be impacted upon by the construction of the other cumulative schemes. Therefore, the residual construction cumulative effects are as set out in **Table 10.8**.

10.9.2 Operation

133. The Proposed Development could, in combination with other windfarm developments in the area that are consented but not yet built, or are subject of valid planning applications, result in adverse cumulative effects on the setting of heritage assets. Operational windfarms form part of the current setting of heritage assets within the Study Area and the cumulative effects from the Harestanes, Minnygap, and Dalswinton windfarms have been considered as part of the assessments provided in **Section 10.6.3 Operation**.
134. The nearest consented windfarms of Loganhead, Hopsrigs, Crossdykes, and Solwaybank are all located to the east and south east of the Proposed Development at distances of over 20km away. The most likely cumulative impacts from these consented windfarms would relate to the heritage assets to the south east of the Proposed Development. However, given the distances the potential impacts on the setting of any heritage assets within the Study Area from these consented windfarms is deemed to be No Change or Negligible Adverse as the new infrastructure would be almost imperceptible from the majority of the heritage assets assessed representing very minor changes to their setting and possible key views. Therefore, the introduction of the Proposed Development would not result in any cumulative increase (or decrease) in the overall significance of effect for each of the heritage assets assessed.
135. Developments that are the subject of valid planning applications have also been considered in the cumulative impact assessment, and similarly to the consented schemes, the distances from the Proposed Development would only result in very minor, if any, changes to the setting of heritage assets within the Study Area. Therefore, the

introduction of the Proposed Development if these schemes were operational would not result in any cumulative increase (or decrease) in the overall significance of effect for each of the heritage assets assessed.

10.10 Summary

136. The Archaeology and Cultural Heritage assessment conducted in relation to the Proposed Development has been based on a desk-based assessment, field surveys, and consultations with HES and the Dumfries and Galloway Council Archaeologist.
137. A total of 116 heritage assets have been included in the baseline related to the assessment of the Proposed Development. Twelve of these were identified within the Site Boundary, one of which is a Listed Building, eight of which relate to Post-Medieval agricultural practices from the 18th and 19th century, alongside three Modern heritage assets. All of these heritage assets were deemed to be of Low or Negligible value apart from the Whitefaulds memorial (MDG12895) (**HA43**), and the Category C Listed Garvald Church (LB10382) (**HA72**), which are deemed to be of Medium value. An assessment of the archaeological potential for currently unknown heritage assets to be present within the Site Boundary is deemed to be low due to the altitude and lack of other archaeological remains in close proximity other than upstanding Post-Medieval agricultural heritage assets.
138. The layout of the Proposed Development has been designed as far as possible to avoid direct impacts on the identified heritage assets within the Site Boundary. However, there are potential direct impacts on seven of these heritage assets, ranging from Minor to Major magnitude. After mitigation measures of demarcation or recording, the residual significance of effect on these heritage assets would be mostly **Neutral**, with one **Slight Beneficial** significance of effect on the Whitefaulds Quarry (MDG12895) (**HA44**), which may be re-used and extended during construction.
139. Within the wider Study Area, there are a further 104 heritage assets forming the baseline. Of these heritage assets, there are no significance of effects deemed to be greater than **Slight Adverse** in relation to impacts on their setting. The largest impacts relate to heritage assets in close proximity to the Site Boundary, or those that may be more distant but have views of a greater number of turbines. However, none of the impacts do more than introduce slight changes to the setting of these heritage assets, with the majority of key views unaffected.
140. The assessment of cumulative effects from other windfarms that are either operational, consented, or subject to planning applications has shown that the introduction of the Proposed Development alongside these other windfarm developments would not cumulatively increase (or decrease) the significance of effect on any of the heritage assets within the Study Area.

10.11 References

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Harestanes South Windfarm Extension Project Team

ScottishPower Renewables
9th Floor ScottishPower Headquarters
320 St Vincent Street
Glasgow
G2 5AD

HarestanesSouthWindfarm@scottishpower.com

