



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	4
10.4	Assessment Methodology and Significance Criteria	9
10.4.1	Study Area	9
10.4.2	Desk Study	9
10.4.3	Field Surveys	9
10.4.4	Assessment Methodology	9
10.4.5	Significance Criteria	10
10.4.6	Limitations to Assessment	10
10.5	Baseline Conditions	11
10.5.1	Introduction	11
10.5.2	Baseline Summary	11
10.5.3	Historical Background	12
10.6	Potential Effects	15
10.6.1	Mitigation by Design and Embedded Mitigation	15
10.6.2	Construction	15
10.6.3	Operation	16
10.7	Mitigation	21
10.7.1	Construction	21
10.7.2	Operational	22
10.8	Residual Effects	22
10.8.1	Construction	22

10.8.2	Operation	23
10.9	Cumulative Assessment	23
10.9.1	Construction	23
10.9.2	Operation	23
10.9.3	Cumulative Summary	25
10.10	Summary	25
10.11	References	26

List of Figures

- 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 25: Knockinculloch Enclosures
- Figure 10.6 Viewpoint 26a: Kilkerran (B741)
- Figure 10.7 Viewpoint 26b: Kilkerran (East of Aird Bridge)
- Figure 10.8 Viewpoint 27: Baing Loch Chambered Cairn
- Figure 10.9 Viewpoint 28: Pinbreck Hill Cairn
- Figure 10.10 Viewpoint 29: Mote of Doonan's Dun
- Figure 10.11 Viewpoint 30: Maxwellston Hill Fort
- Figure 10.12 Viewpoint 31: Loch Doon
- Figure 10.13 Viewpoint 32: Kirkmichael House
- Figure 10.14 Viewpoint 33: Dalquharran Castle
- Figure 10.15 Viewpoint 34: Craigengillan GDL/Auchenroy Hill Cairn
- Figure 10.16 Viewpoint 35: Blairquhan (from Kings Hill)
- Figure 10.17 Viewpoint 36: Bargany House GDL

List of 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 Wind Turbine Locations
- Appendix 10.4 Assessment of Heritage Assets between 5km and 10km of the Wind Turbine Locations
- Appendix 10.5 Assessment of Cumulative Effects
- Appendix 10.6 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 Report (EIAR) for the Proposed Development. Archaeology and cultural heritage comprise a diverse range of elements that are referred to throughout the EIAR 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 (GDL), Battlefields, Conservation Areas, Marine Protected Areas, other underwater sites, buried archaeological remains, other historic buildings, and earthworks. The specific objectives of this 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.
3. Additional information which supports this chapter is presented in the following figures and 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 25: Knockinculloch Enclosures;**
 - **Figure 10.6 Viewpoint 26a: Kilkerran (B741);**
 - **Figure 10.7 Viewpoint 26b: Kilkerran (East of Aird Bridge);**
 - **Figure 10.8 Viewpoint 27: Baing Loch Chambered Cairn;**
 - **Figure 10.9 Viewpoint 28: Pinbreck Hill Cairn;**
 - **Figure 10.10 Viewpoint 29: Mote of Doonan’s Dun;**
 - **Figure 10.11 Viewpoint 30: Maxwellston Hill Fort;**
 - **Figure 10.12 Viewpoint 31: Loch Doon;**
 - **Figure 10.13 Viewpoint 32: Kirkmichael House;**
 - **Figure 10.14 Viewpoint 33: Dalquharran Castle;**
 - **Figure 10.15 Viewpoint 34: Craigengillan GDL/Auchenroy Hill Cairn;**
 - **Figure 10.16 Viewpoint 35: Blairquhan (from Kings Hill); and**
 - **Figure 10.17 Viewpoint 36: Bargany House GDL.**
 - **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 Wind Turbine Locations;**
 - **Appendix 10.4 Assessment of Heritage Assets between 5km and 10km of the Wind Turbine Locations;**

- **Appendix 10.5 Assessment of Cumulative Effects; and**
- **Appendix 10.6 Archaeology and Cultural Heritage Gazetteer.**

4. 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.
5. The description of other elements of infrastructure of the Proposed Development assessed in this chapter can be found on **Figure 4.1 Site Layout** and **Chapter 4: Development Description**. The archaeology and cultural heritage aspects of the Site selection and design are described in full in **Chapter 3: Site Selection and Design**. **Appendix 4.1 Proposed Offsite Access Appraisal** considers the potential archaeology and cultural heritage effects of the proposed offsite access route to the Site, concluding that there would be no potential significant effects likely to occur as a result of the offsite access route upgrade works and as a result, this has not been assessed further within this chapter.

10.2 Legislation, Policy and Guidance

10.2.1 Legislation

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

10.2.2 Policy

7. The following 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, 2014);
 - Scottish Planning Policy (SPP) Paragraphs 135-151 (Scottish Government, 2014);
 - 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 following local planning policy relevant to archaeology and cultural heritage that has been considered as part of the assessment includes:
 - South Ayrshire Council Local Development Plan (LDP2) 2014 (South Ayrshire Council, 2014):
 - LDP Policy: historic environment;
 - LDP Policy: archaeology;
 - LDP Policy: estates;
 - LDP Policy: wind energy;
 - Supplementary Guidance (2014): Historic Environment; and
 - Supplementary Guidance (2015): Wind Energy (Section E: Historic Environment and Archaeology).

10.2.3 Guidance

9. The following guidance has been applied to the assessment process:
 - Environmental Impact Assessment Handbook (Scottish Natural Heritage (SNH)¹ & HES, 2018);
 - Designation Policy and Selection Guidance (HES, 2020a);
 - Managing Change in the Historic Environment Setting (HES, 2020b); and
 - Procedural Guidance for Archaeology and Development (West of Scotland Archaeology Service (WoSAS), 2009).

¹ Scottish Natural Heritage (SNH) are now referred to as NatureScot. Any references to SNH relate to documentation produced before the change in name.

10. All elements of the assessment have been undertaken in accordance with the following policies and guidelines of the Chartered Institute for Archaeologists (CIfA):
- Standards and Guidance for Historic Environment Desk Based Assessment (CIfA, 2020a); and
 - Standards and Guidance for commissioning work on, or providing consultancy advice on, archaeology and the historic environment (CIfA, 2020b).

10.3 Consultation

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

Consultee	Response	Action
South Ayrshire Council – WoSAS Historic Environment Record (HER) Data Request (05/03/2020)	No clear details of the nature of the Proposed Development for the area, however given its location it seems likely that it may be a windfarm. Have provided a 10km search area instead of the original 1km search area to ensure there are no significant shortcomings in the subsequent Environmental Statement (ES).	Agree, the initial 1km data request was to inform initial screening and scoping. The updated 10km has allowed for detailed assessment on the setting of assets.
Historic Environment Scotland Scoping Opinion (03/06/2020)	We consider that it may be possible to accommodate a windfarm at this location but, based on the information provided so far, note that there is the potential for significant adverse impacts on heritage assets and their settings located in the vicinity of the proposals. In order to address these issues mitigation by design, including alterations to the development layout and wind turbine heights, may be required. We would therefore be keen to engage further as the development progresses and are happy to offer more detailed comments as further Zone of Theoretical Visibility (ZTV) information and wireframe views become available.	The scoping was based on the full development area and Scoping Layout wind turbines. The Proposed Development has reduced significantly, and we have worked with the landscape and visual impact assessment (LVIA) team and sought to design out significant adverse visual impacts through the iterative design process. This has resulted in the decrease in wind turbine layout to 13 wind turbines. ZTV data was issued to HES on 9 October 2020 to enable further engagement. Their responses are available below.
	We note that two scheduled monuments are located inside the Site Boundary for the development. These are Knockinculloch, enclosures on E slope of, 600m NW of Glenalla (Scheduled Monument, Index no. 3357) and Bencallen Hill, Chambered Cairn	HES comments have been welcomed and their concerns noted. We have designed the wind turbine layout to remove any potential direct impacts on any designated assets. The archaeological assessment has been integrated with the LVIA to design out any

Consultee	Response	Action
	(Scheduled Monument, Index no. 3890). We therefore consider that any assessment should pay particular attention to the potential for impacts on these heritage assets and their settings during the construction and operational phases of the development. In line with this, we would expect that mitigation is embedded into the design of the development to reduce and avoid adverse impacts where appropriate.	significant adverse visual impacts through the iterative design process.
	We also recommend that ZTV analysis should be used to identify potential impacts on the setting of heritage assets caused during the operational phase of the development.	The ZTV is presented within Figure 10.2 Heritage Assets – Study Area .
	We would recommend that ZTV analysis is applied to the proposal to provide a basis for selecting sites in the wider area which should be assessed as part of an EIA. We do not consider that the 5km Study Area suggested at Section 8.3 of the Scoping Report is suitable in this instance. We therefore recommend that all nationally important assets located up to 10km from the proposals are appraised and included for detailed assessment where there is a potential for impacts on their settings. Individual heritage assets located at a greater distance than 10km of the wind turbines should also be considered where they are acknowledged to have potentially sensitive settings. As above, we would expect that mitigation is embedded into the design of the development to reduce and avoid adverse setting impacts where appropriate.	The Study Area for the baseline has been increased to include all heritage assets under HES remit out to 10km from the wind turbine locations. The assessment has considered nationally important assets up to 10km. Further assessment of particularly sensitive heritage assets beyond 10km has also been undertaken where appropriate. The archaeological assessment has been integrated with the LVIA to design out significant adverse visual impacts through the iterative design process.
	We consider that significant impacts may occur on the setting of the below heritage assets: Knockinculloch, enclosures on E slope of, 600m NW of Glenalla (Scheduled Monument, Index no. 3357);	The impacts on the identified assets have been considered as part of the assessment. It should be noted that Motte Knowe (SM2863) has been identified as having no visibility, so would not experience any significant adverse impacts.

Consultee	Response	Action
	<ul style="list-style-type: none"> Bencallen Hill, Chambered Cairn (Scheduled Monument, Index no. 3890); Maxwellston Hill, fort (Scheduled Monument, Index no. 2201); Mote Knowe, motte, Kilkerran (Scheduled Monument, Index no. 2863); Kilkerran House (Category A Listed Building LB1114 and Inventory Designed Landscape GDL238); and Blairquhan (Category A Listed Building LB19094 and Inventory Designed Landscape GDL63). <p>This list is not exhaustive. We would welcome further discussion on this as your assessment is progressed and more detailed ZTV information becomes available.</p> <p>Further detailed information for each heritage asset listed above is available within the Annex of the HES Scoping Opinion.</p>	<p>Kilkerran House (LB1114) and Blairquhan House (LB19094) have also been identified as having no visibility from the individual assets, but the GDL within which they sit are included within the assessment.</p> <p>A more detailed ZTV was sent to HES on 9 October 2020 to enable further discussions. Their responses are available below.</p>
	<p>We recommend that impacts on the setting of heritage assets should be assessed using photomontage and wireframe visualisations where impacts are likely to be highest.</p>	<p>Agree, and has been included within the assessment (see Figures 10.4 to 10.17).</p>
	<p>While some visualisation viewpoints are included at Figure 5.3 of the Scoping Report, we would highlight the requirement for visualisation viewpoints to be selected with the aim of informing an assessment of cultural heritage impacts. We have suggested some visualisation viewpoints in the Annex below, however, would welcome further discussion (further details within the Annex of the HES Scoping Opinion).</p>	<p>Agree, and has been included within the assessment (see Figures 10.4 to 10.17).</p> <p>A more detailed ZTV was sent to HES on 9 October 2020 to enable further discussions. Their responses are available below.</p>
	<p>We would recommend that cumulative impacts are assessed and examined</p>	<p>Agree, and has been included within the assessment.</p>

Consultee	Response	Action
	<p>through the use of cumulative visualisations.</p>	
South Ayrshire Council – West of Scotland Archaeology Service Scoping Opinion	<p>I am able to state that based on the information provided so far, I am of the opinion that there is a likelihood of significant adverse impacts on historic environment assets within the proposed development area, and also on the settings of such assets located within and outwith the boundary of the proposals.</p> <p>While it is possible that many potential impacts could be mitigated or avoided by changes to the design such as alterations to the development layout and the installed wind turbine heights, it may be that depending on the details, the remaining adverse impacts would be such that I would recommend that the Council object to the final submitted proposals on historic environment policy grounds. In order for the Council to determine its position with regard to the relevant policies, I would expect the developer to support any arguments regarding the potential impacts on historic environment assets with an appropriate level of assessment, including visualisations of the appropriate settings of an agreed list of assets.</p>	<p>The WoSAS comments have been welcomed and their concerns noted.</p> <p>The Proposed Development has reduced significantly, and we have worked with the LVIA team and sought to design out any significant adverse visual impacts through the iterative design process. This has resulted in the decrease in wind turbine layout to 13 wind turbines.</p>
	<p>Should the development proceed, it is likely that archaeological remains within the application boundary would be vulnerable to damage or destruction during the construction phase. I would expect the developer to bring forward more detailed proposals for appropriate measures to mitigate unavoidable impacts and to avoid unnecessary destruction, and that these measures would be agreed in advance and secured by appropriate condition if required.</p>	<p>Agree. Appropriate mitigation has been proposed for heritage assets that may be directly impacted upon by the Proposed Development.</p>
	<p>I would expect to see further information on the ZTV and the views relevant to</p>	<p>Agree and this approach has been included within the assessment.</p>

Consultee	Response	Action
	<p>important historic environment assets in the final EIAR.</p> <p>I would expect any EIA undertaken for the proposals to include a detailed assessment of impacts on the historic environment, both within the application boundary and within the viewshed beyond.</p> <p>I would also expect that the spatial limits of such assessment would be flexible, and to expand to include historic environment assets at greater distance, where these assets have greater sensitivity to landscape change or visual impacts.</p>	
	<p>The Scoping Report proposes a Study Area extending up to 5km from the application boundary. I do not believe that this is adequate for a full assessment of potential impacts on the historic environment. Many important historic environment assets enjoy prominent locations with distant views, or have specific sightlines which can extend over long distances, and with structures of the scale proposed, the visual effects will be apparent at greater distances.</p> <p>I would recommend that the Study Area be extended to include all historic environment assets within the ZTV up to 10km beyond the application boundary, and that other important assets, whether currently designated or not, with sensitive settings and which are located in the ZTV at greater distances should also be considered.</p> <p>The Council's archaeology service would be available to liaise with the archaeological consultants for the developer for consultation on an agreed list of assets beyond the Study Area that should also be considered in the assessment.</p>	<p>The assessment has considered nationally important assets up to 10km. WoSAS had requested all assets up to 10km were assessed. The Applicant had reservations on assessing all assets out to 10km as this introduces an exponential amount of data and does not reflect a proportionate response. Further consultation with WoSAS has been requested with a view to agreeing a proportionate baseline, and to agree any sites outside the Study Area that should be included.</p> <p>WSP have attempted to engage WoSAS in further consultation post Scoping and are currently instigating contact via South Ayrshire Council.</p>

Consultee	Response	Action
	<p>It will also be important that the potential for cumulative impacts on the setting of historic environment assets caused by the addition of the proposed development would have is assessed. We would therefore recommend that the visualisations that are produced in support of the application include cumulative impacts.</p>	<p>Agree and this approach has been included within the assessment (see Figures 10.4 to 10.17).</p>
	<p>The recorded presence of two Scheduled Monuments and a number of other, currently non-designated assets, and a range of other already known archaeological sites in the vicinity indicate that there may additional archaeological sites in the area that have yet to be discovered and which may be vulnerable to direct damage or destruction as a result of the proposed development. I would expect the EIA process to assess the likelihood of the presence of such previously unrecorded archaeological resources, and to bring forward proposals for appropriate measures to mitigate impacts or to avoid unnecessary or unrecorded losses should consent for the development be granted.</p>	<p>An assessment of the archaeological potential of the Proposed Development has been undertaken. Potential impacts have been assessed, and mitigation proposed as necessary.</p>
Crosshill, Straiton and Kirkmichael Community Council Scoping Opinion	<p>5.5.2 Preliminary work shows that the indicative layout would not be visible from Culzean Castle or its surroundings. If the layout alters and it is visible from any part of Culzean Castle and Park then Culzean Castle Garden and Designated Landscape (GDL) should not be scoped out.</p> <p>Other designated landscapes in the vicinity have been omitted and should be included.</p> <p>Question 11: Do you agree with the Cultural Heritage proposed approach for baseline collection, prediction of effects and significance assessment?</p>	<p>Where designated landscapes have not been included this is because there is no visibility or limited visibility from greater distances. These heritage assets are appropriate to be scoped out as there is a lack of potential for significant effects.</p> <p>Culzean Castle GDL would have no visibility from within its polices and has therefore been scoped out (see Figure 10.3 Cumulative Schemes).</p> <p>WSP consulted HES and WoSAS with regard to proportionality of assessment and a 10km Study Area was agreed as proportionate with HES. The refreshed ZTV does identify that there would be no visibility towards the Proposed Development from Culzean Castle.</p>

Consultee	Response	Action
	<p>8.3. Does not agree with the Cultural Heritage proposed approach for baseline collection, prediction of effects and significance assessment. Assessments should be made on all assets up to 20km from the Site Boundary. This would ensure Turnberry Castle, Culzean Castle, Dunaskin and other important cultural assets are included in assessments.</p> <p>8.6. From past experience with floodlighting of windfarms under construction the lighting impacts on a much wider area, especially where no other source of lighting exists.</p>	<p>Although there are limited views (single blade tip) from elements of Turnberry Castle, due to the distances involved and the intermediate screening from dispersed settlement and infrastructure, it is proposed to scope this element out of further assessment as there is a lack of potential for significant effects.</p> <p>WSP consulted HES with regard to assets beyond the initial 10km assessment. Dunaskin was not requested by HES for consideration as it is unlikely that the Proposed Development would affect the ability to appreciate and understand the asset.</p>
	<p>Question 18: Do you agree with the list of issues to be scoped out and the rationale behind the decision?</p> <p>We do not agree with scoping out Culzean Castle GDL if the layout changes and the ZTV shows the Proposal would be seen.</p>	<p>Where designated landscapes have not been included this is because there is no visibility or limited visibility from greater distances, so these are appropriate to be scoped out.</p> <p>WSP consulted HES and WoSAS with regards to proportionality of assessment. The refreshed ZTV does identify that there would be no visibility towards the Proposed Development from Culzean Castle (see Figure 10.3 Cumulative Schemes).</p>
Daily Community Council Scoping Opinion	<p>Question 5: Has the consultee identified any further landscape or visual receptors to be considered within the assessment (e.g. where potential significant effects may occur)?</p> <p>Has enough consideration been given to Historic or Listed Buildings – Dalquharran Castle and any future development at Dalquharran, businesses that depend on venues for weddings and tourists – Turnberry, local craft shops, Brunston Holiday Chalets.</p>	<p>All Listed Buildings within 10km of the wind turbine locations have been included within the assessment where they have visibility according to the ZTV (see Figure 10.2 Heritage Assets – Study Area). This includes Dalquharran Castle and the designed landscape within which it sits.</p> <p>Although there are limited views (single blade tip) from elements of Turnberry Castle, due to the distances involved and the intermediate screening from dispersed settlement and infrastructure, it is proposed to scope this element out of further assessment as there is a lack of potential for significant effects.</p>
	<p>Does not agree with Cultural Heritage proposed approach for baseline collection, prediction of effects and significance assessment. As the height (200m) is so much greater than what is already in place in the area,</p>	<p>WSP consulted HES and WoSAS with regard to proportionality of assessment. The refreshed ZTV does identify that there would be no visibility towards the Proposed Development from Culzean Castle.</p>

Consultee	Response	Action
	<p>consideration must be given to Cultural Heritage further afield – Culzean and Turnberry should be included in this zone, therefore at least 20km from the Site Boundary.</p>	<p>Although there are limited views (single blade tip) from elements of Turnberry Castle, due to the distances involved and the intermediate screening from dispersed settlement and infrastructure, we would seek to scope this element out of any further assessment as there is a lack of potential for significant effects.</p>
Historic Environment Scotland Statutory Consultee Meeting (29/09/2020)	<p>HES welcomed the presentation of the updated design and ZTV which was issued ahead of meeting.</p> <p>HES requested an updated dataset and ZTV to narrow down and for WSP to provide commentary on what has moved.</p> <p>Highlighted that the updated design had changed and shifted visibility to the north west and east of the Proposed Development and removed visibility from the south.</p> <p>HES stated that they would be happy to provide additional scoping comments once they have reviewed the updated ZTV figures.</p>	<p>WSP provided an updated PDF A1 figure with HES interests presented, overlaid on the refreshed ZTV, base map and OS gridlines.</p> <p>WSP provided GIS shapefiles of Proposed Development and ZTV to accompany PDF A1 figure.</p>
	<p>HES noted that the Category A listed Kilkerran House (LB1114) and its associated designed landscape (GDL238). be assessed with views towards the Proposed Development.</p>	<p>HES comments have been welcomed and their concerns noted. A visualisation from the point requested is included within the assessment (see Figure 10.7 Viewpoint 26b: Kilkerran (East of Aird Bridge)) as is another visualisation from the B741 (see Figure 10.6 Viewpoint 26a: Kilkerran (B741)), both of which show there is no visibility of the wind turbines from these locations.</p>
	<p>HES requested information of views across Loch Doon Castle (SM90203) towards the Proposed Development.</p>	<p>HES comments have been welcomed and their concerns noted. No views of the Proposed Development from the Castle exist; however a visualisation has been included from the western slopes of the Coran of Portmark, overlooking Loch Doon and the re-erected Loch Doon Castle (see Figure 10.12 Viewpoint 31: Loch Doon), highlighting the peripheral views towards the Proposed Development.</p>

Consultee	Response	Action
	HES requested assessment of Dalquharran Castle (Old Castle) SM316 and Dalquharran Castle Including Stable Range (LB125). HES noted that there has been recent tree clearance in the area which may impact on views towards to Proposed Development.	Both assets have been included as part of our assessment. To supplement, visualisations have also been produced for Dalquharran Castle Including Stable Range (LB125). (see Figure 10.14 Viewpoint 33: Dalquharran Castle).
	HES requested that cumulative visualisations supplement the assessment.	This approach has been included within the assessment and cumulative visualisations have been provided for all viewpoint locations (see Figures 10.4 to 10.17).
Historic Environment Scotland Additional Scoping Advice (20/10/2020)	HES welcome where changes have been made to the development proposals to reduce and avoid impacts on the Category A listed Kilkerran House (LB1114) and its associated designed landscape (GDL238). HES note that there remains some potential for impacts on the setting of these heritage assets and recommend that consideration is given to this in any EIA undertaken. In particular, they recommend that consideration is given to the potential for impacts on the setting of the designed landscape caused by the appearance of wind turbines in views from the B741 towards Kilkerran House and recommend that a visualisation be produced from a point just east of Aird Bridge.	HES comments have been welcomed and their concerns noted. A visualisation from the point requested is included within the assessment (see Figure 10.7 Viewpoint 26b: Kilkerran (East of Aird Bridge)) as is another visualisation from the B741 (see Figure 10.6 Viewpoint 26a: Kilkerran (B741)), both of which show there is no visibility of the wind turbines from these locations.
	HES note that impacts on the setting of the category A listed Blairquhan House (LB19094) and the core of its designed landscape are reduced, but there remains some potential for impacts on the northern part of the inventory designed landscape (GDL63). HES recommend that consideration is given to impacts on this inventory designed landscape and its setting, with particular attention given to views from the Kings Hill.	Elements of the Blairquhan GDL (GDL63) would have visibility of the Proposed Development so has been included within the assessment. A visualisation from King's Hill has been provided (see Figure 10.16 Viewpoint 35: Blairquhan (from Kings Hill)).
	Further to this, we note that some of the adjustments undertaken to the development proposals have resulted in	All Listed Buildings within 10km of the wind turbine locations have been included within the assessment where they have visibility

Consultee	Response	Action
	additional visibility of the windfarm proposals to the north and west. We therefore suggest that, in addition to the heritage assets identified in our letter of 3 June 2020, any EIA should give attention to the potential for impacts on the setting of the below heritage assets. Dalquharran Castle including Stable Range (Category A Listed Building, LB125) - Any EIA should give consideration to the potential for impacts on the setting of Dalquharran House caused by the appearance of wind turbines in important views from the house looking across the Girvan Water towards the development site; and Bargany House (Category A Listed Building, LB1171, and Inventory Designed Landscape, GDL47) - Any EIA should give consideration to impacts on the setting of the Bargany Inventory Designed Landscape. We recommend that particular attention is given to impacts caused by the appearance of wind turbines in views from the north parkland looking into the core of the landscape including the house and walled garden.	according to the ZTV (see Figure 10.2 Heritage Assets– Study Area). This includes Dalquharran Castle and Bargany House alongside the designed landscapes within which they sit. Visualisations have been produced from the locations requested (see Figure 10.14 Viewpoint 33: Dalquharran Castle , and Figure 10.17 Viewpoint 36: Bargany House).
	HES also note the potential for cumulative impacts on the setting of heritage assets caused by the Proposed Development in combination with other existing, proposed and consented windfarms in the surrounding area. We would therefore recommend that cumulative impacts are assessed and examined through the use of cumulative visualisations.	This approach has been included within the assessment and cumulative visualisations have been provided for all viewpoint locations (see Figures 10.4 to 10.17).
South Ayrshire Council – WoSAS HER Data Refresh (08/09/2021)	Confirmation that the refresh data was for the 10km buffer around the Proposed Development. No clarity on what records have been added to the HER in the last year due to COVID-19 and the lack of access to Geographic	New dataset cross referenced to dataset from 2020, to ensure assessment is up to date.

Consultee	Response	Action
	Information Systems (GIS) and remote working.	

Table 10.1 Consultation Responses

10.4 Assessment Methodology and Significance Criteria

10.4.1 Study Area

- The focus of this chapter is on the direct and indirect impacts from the Proposed Development. Therefore the Study Area provides an archaeological contextual background for the area immediately surrounding the Site Boundary, as well as for the wider area. The study of the heritage assets in the surrounding landscape establishes the local archaeological and historical context, providing a broader understanding of the historical development of the Site and the potential for as-yet-unidentified archaeological remains within the Site Boundary. 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 a wider Study Area.
- The Site Boundary contains all windfarm infrastructure related to the Proposed Development and is shown in **Figure 10.1 Heritage Assets – Site Boundary**. It 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 Boundary;
 - 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 wind 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 the Proposed Development. **Figure 10.2 Heritage Assets – Study Area** details the;
 - the Proposed Development;
 - the blade tip height ZTV; and
 - the location of baseline heritage assets up to 10km from the wind turbine locations from which there would be a theoretical view of the wind turbines.

10.4.2 Desk Study

- The assessment has been informed by a review of all 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, Listed Buildings, and GDL's was obtained from HES;
 - GIS data on other cultural heritage assets was obtained from the Scottish National Record of the Historic Environment (SNRHE) which is maintained by HES;
 - information from the South Ayrshire Historic Environment Record (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, available on-line from the National Library of Scotland (NLS). 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, examined via the NLS;

- 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 Boundary based on that recorded by the British Geological Survey/Geological Survey of Great Britain maps.

- To aid in the assessment, a ZTV was produced to indicate the area from which the Proposed Development may be visible (**Figure 10.2 Heritage Assets – Study Area**). The ZTV was produced by computer modelling. All wind turbine locations with proposed height data for the Proposed Development were overlain on a digital terrain model and 'lines of sight' were computer generated to show where they would be visible. The ZTV used the Ordnance Survey Terrain 5 DTM, and allowed for a viewer eye height of 2m.
- It should be noted that this is a 'bare ground' ZTV, making no allowance for screening from buildings or vegetation. Although it represents a realistic indicator of areas from where the Proposed Development would be visible, 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 that are not shown, or areas shown as having a view that, in reality, do not.

10.4.3 Field Surveys

- A targeted walkover survey of the wind turbine locations, Substation Compound and access tracks was carried out in March and August 2020, and May 2021 in order 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.
- All areas of open 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 Proposed Development.

- Field visits were undertaken to selected heritage assets in the Study Area in order to assess their baseline setting.

10.4.4 Assessment Methodology

- 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.
- Tables 10.2 to 10.4** provided below contain the assessment criteria and have been determined through a combination of HES (SNH & HES, 2018) and International Council on Monuments and Sites (ICOMOS) guidance (ICOMOS 2011), with the most recent revision of the Design Manual for Roads and Bridges (DMRB) LA104 (2019) incorporated to allow for greater definition of the magnitude of impacts and to include the possibility of beneficial impacts within the assessment methodology.
- 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, 2020a) and the HEPS (HES, 2019).
- 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.
- The determination of setting has been undertaken in accordance with guidance provided within the Managing Change Guidance (HES, 2020b). 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.

28. **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); and • 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; and • 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; and • 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; and • 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); and • 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 Cultural Heritage Assets

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

	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 resource is totally altered; and • 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; and • 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 resource is clearly modified; and • considerable changes to Setting that affect the character of the asset such as 	<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; and

	Adverse	Beneficial
	<ul style="list-style-type: none"> • 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 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 asset is slightly altered; and • 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; and • 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; and • 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; and • 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

10.4.5 Significance Criteria

30. The significance of the effect of change on an attribute of a heritage asset is a function of the importance of the attribute and the scale of change. For the purpose of this assessment, impacts 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**.

		Magnitude of Impact				
		Major	Moderate	Minor	Negligible	No Change
Value	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

31. The technical terminology applied to the assessment process is based on that contained within the SPP framework. Professional judgement is applied throughout.
32. 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.

33. During the walkover survey, every effort was made to thoroughly investigate all proposed wind turbine locations and access tracks. However, some areas were not accessible 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 would have been considerably reduced.

10.5 Baseline Conditions

10.5.1 Introduction

34. The location of the designated and undesignated heritage assets which lie within the Site Boundary and the Study Area are provided in **Appendix 10.6 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 heritage assets noted as nationally significant within the South Ayrshire HER, out to 10km from the wind turbine locations, that are within the ZTV of the Proposed Development. Regionally significant heritage assets where their landscape setting is considered a key characteristic are also included in the baseline out to 10km from the wind turbine locations.
35. The Category A Listed Buildings of Kilkerran House (LB1114) (HA66) and Blairquhan House (LB19094) (HA46) form an integral part of the GDL's within which they sit, and despite having no visibility of the Proposed Development from their respective locations, have been assessed as individual heritage assets due to the potential for impacts on views towards them from locations within and surrounding the GDL's.

10.5.2 Baseline Summary

36. The Site Boundary contains seven known undesignated heritage assets dating from the Post-Medieval period.
37. The Study Area contains a further 111 heritage assets that have been identified as being within the ZTV of at least one of the wind turbines. The baseline also includes the two Category A Listed Buildings of Kilkerran House and Blairquhan House, neither of which are within the ZTV, but are included within this assessment. No heritage assets outside the 10km buffer have been recommended for inclusion in the baseline after consultation with HES. Of the 113 heritage assets in the Study Area, there are 20 heritage assets within 5km of the wind turbine locations, comprising:
- two Scheduled Monuments;
 - one GDL;
 - one Ayrshire Designed Landscape;
 - 11 undesignated heritage assets deemed to be of national significance; and
 - five undesignated heritage assets of regional significance.
38. The remaining 93 heritage assets in the Study Area lie between 5km and 10km of the wind turbine locations and consist of:
- six Scheduled Monuments;
 - 58 Listed Buildings (Six Category A, 24 Category B, and 28 Category C);
 - three GDL's;
 - four Conservation Areas;
 - four Ayrshire Designed Landscapes;
 - 12 undesignated heritage assets deemed to be of national significance; and
 - six undesignated assets of regional significance.
39. There are also 62 designated heritage assets or undesignated heritage assets deemed to be of national or regional significance identified within 10km of the wind 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
SM10986	Rowantree Tollhouse and Inn	LB19102	Old Bridge of Blairquhan
SM5387	Drummochreen House	LB19097	The Kennels, Blairquhan
SM3358	The Lady Chapel	LB19095	Stables, Blairquhan
SM2863	Mote Knowe Motte	LB19099	Greenhouse and Walled Garden, Blairquhan
WoSAS Pin 53544	Grimmet, non-inventory GDL	LB19101	Girvan Lodge, Blairquhan
LB1119	Drumburle	LB13782	Cloncaird Castle Bridge
LB1120	Gigmagog	LB7555	Blairquhan Bridge
LB1118	Aird Bridge	LB11738	Ayr Lodge, Blairquhan
LB1116	Woodside and Neighbouring Cottages	LB7534	Kirkmichael Parish Church
LB1115	Ice-House, Kilkerran House	LB7535	Kirkmichael Parish Churchyard
LB1117	Drumgirnan Bridge	LB7553	Kirkport Cottages
LB1146	Maxwellston	LB19096	Ice House, Blairquhan
LB1029	Stinchar Bridge	LB126	Kilkerran Castle
LB1024	Alton Albany	LB7535	Lych Gate, Kirkmichael Parish Church
LB1031	Gregside and Burnlea	WoSAS Pin 5409	Lochspouts
LB1034	Gregholm	WoSAS Pin 5396	Lochspouts
LB102	Jolly Shephard Hotel	WoSAS Pin 5395	Craigdow
LB1023	United Free Church Manse	WoSAS Pin 5460	East Threave
LB1028	Barr Old Parish Church and Churchyard	WoSAS Pin 5439	Machrikil
LB1030	Gregg Bridge	WoSAS Pin 11582	The Lanes
LB1032	Bridge View	WoSAS Pin 11581	The Lanes
LB1033	Shalloch Cottage	WoSAS Pin 11570	Milton
LB1035	Elm Cottage	WoSAS Pin 11660	Tarfessock
LB1035	Woodbine Cottage	WoSAS Pin 7165	Macnabstone
LB1037	Barr Parish Church	WoSAS Pin 7166	Wee Hill of Glenmount

Reference Number	Site Name	Reference Number	Site Name
LB1038	Dinmurchie, Barr	WoSAS Pin 7181	Glenmount
LB51711	Loch Doon Dam	WoSAS Pin 7164	Little Shalloch
LB18793	Craigengillan	WoSAS Pin 7159	Red Burn Bridge
LB18794	Stable Block, Craigengillan	WoSAS Pin 12031	Braker
LB49506	Dalcairnie Bridge over Dalcairnie Burn	WoSAS Pin 7182	Knockdon
LB19100	Near Lodge, Blairquhan	WoSAS Pin 7183	Fore Burn/Glenthriag

Table 10.5 Heritage Assets With No Visibility of Any Wind Turbines

10.5.3 Historical Background

40. The historical background presents a summary of the baseline information provided in the Gazetteer, and is focussed on interpreting the information relevant to assessing the potential for encountering as yet unknown archaeological features within the Site.
41. The heritage assets within the Site Boundary and the 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; and
 - 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

42. 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 for their existence, with most heritage assets encountered related to flint scatters. Most known heritage assets from this period have been found in coastal regions with the dominant influence on settlement during this period, 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 resourced such a nomadic existence, make it an unlikely location for encountering Mesolithic or earlier activity.
43. The Neolithic period in Scotland is identified through evidence of the development of more sedentary lifestyles, with seasonal rather than continual movements becoming more evident alongside the growth of farming. The low-lying areas to the north and west of the Site consist 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. Burial cairns are the only examples of this within the Study Area. There are 17 examples of stone cairns, with two of these definitively interpreted as Neolithic in date. Both of these cairns, the Baing Loch Chambered Cairn (WoSAS Pin 7195) (**HA71**), and Bencallen Chambered Cairn (SM3890) (**HA114**) consist of burial chambers formed by large orthostatic stones covered in piles of smaller stones. These monuments were used by whole communities with multiple burials placed together within the chamber.

44. The other 15 cairns (**HA50, HA60, HA78, HA86, HA92, HA98, HA103, HA106, HA108, HA109, HA110, HA112, HA113, HA117, and HA120**) range in size from 5m to 20m in diameter and are likely representative of later Neolithic and Early Bronze Age burial practices with the chambered cairns no longer used and these burial mounds used for the internment of individuals. A number of these cairns are positioned on higher ground and may have been visible from nearby settlement sites, or have been part of a funerary landscape. The River Stinchar Valley may contain one such landscape with three burial cairns (**HA108, HA109, and HA110**) all located on or close to the valley floor and overlooked by the potentially contemporary settlement site of Daljedburgh Huts (**HA105**). The nearby cairns of Bencallen (WoSAS 11675) (**HA112**), Bencallen Chambered Cairn (SM3890) (**HA114**), and Pinbreck Hill Cairn (WoSAS Pin 11676) (**HA117**) add to this cluster of Prehistoric funerary activity at the edge of the higher ground to the south west of the Site.
45. Other similar settlement sites to the Daljedburgh huts are found in low lying areas to the west of the Proposed Development at Delamford (WoSAS Pin 11565) (**HA95**) where the remains of nine hut circles are known to be within 100m of each other. These potential Bronze Age settlements are also prevalent in areas of higher ground with hut circles known at two locations around Gass (**HA45 & HA49**), as well as a single hut circle on the slopes of Knockinculloch (WoSAS Pin 12753) (**HA81**). These settlement sites are evidence of the significant changes during the Bronze Age in relation to settlements practices. The seasonal movements of the Neolithic are abandoned in the Bronze Age and enclosed and unenclosed houses with possible field systems begin to become visible from archaeological sites of this period.
46. The later Prehistoric period of the first millennia BCE and CE see 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 three examples of the former. Both the Kildoon Hill Fort (SM2176) (**HA39**) and Maxwellston Hill Fort (SM2201) (**HA94**) are positioned on prominent locations looking down over the lower lying areas to the north and west, with views beyond the coast towards Arran and the Mull of Kintyre. The other potential fort at Doonan's Hill (WoSAS Pin 6135) (**HA70**) is enclosed by surrounding slopes, and may have been more defensive in nature than the other two.
47. Other settlement sites from this period include the adjacent dun at Mote of the Doonan's (WoSAS Pin 6139) (**HA68**) and the house platform on The Pilot (WoSAS Pin 12754) (**HA90**), providing examples of upland settlement without the defensive infrastructure of a fort's ramparts. Another example of an upland Iron Age settlement can be found at Knockdon (SM7491) (**HA84**) where a partially upstanding enclosure is thought to have contained at least one house from this period. Two other potentially contemporary settlement sites at Dalquharran (WoSAS Pin 5445) (**HA76**) and Maxwellston (WoSAS Pin 5450) (**HA85**), are located to the north west of the Proposed Development, comprising the cropmark remains of enclosures and internal features that are also probably related to Iron Age settlement activity.

10.5.3.2 Roman

48. The Roman occupation of Scotland was short-lived with activity concentrated in southern Scotland. Initial invasions in circa CE 80 and again circa CE 138 left a lasting mark on the landscape where the Romans occupied an area. There are no known Roman heritage assets within the Study Area, with the closest designated asset of Roman origin over 17km to the west at Girvan Mains (SM5596).

10.5.3.3 Medieval

49. Evidence of Early Medieval activity is scarce within the archaeological record, with settlements that would have served the descendants of the hill forts rare discoveries. However, one such earthwork site at Captains Bridge (WoSAS Pin 5447) (**HA64**) may show a continuation in the defensive settlements of the Iron Age with the earthwork cutting off a promontory to provide an enclosed space for a likely settlement.
50. 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. Within the Study Area, there are two such heritage assets that exemplify these centres of control. Dalquharran Old Castle (SM316) (**HA75**) dates to the 15th century and comprised a castellated keep that may have been surrounded by a moat. These imposing and defensive features were not required by the Post-Medieval period and the castle was extended in the 17th century and replaced in the 18th century by the mansion house to the north (Dalquharran Castle).

51. To the north of the Proposed Development, the Straiton Parish Church and Churchyard (LB19089) (**HA53**) provide evidence of earlier Medieval activity in the region with a church having been built at this location in the 13th century. This was rebuilt in 1758, with the original aisle retained during reconstruction. The graveyard surrounding the church contains a 17th century grave marker related to a local covenanter but is also likely to contain graves from the church origins in the 13th century.
52. In the later Medieval period everyday settlements become more visible in the archaeological record with individual homesteads and farmsteads surviving in upland areas in particular. The Dalnean Hill Farmstead (SM4390) (**HA48**) is a well-preserved example of the type of long buildings that were used in this period, moving away from the circular huts and houses used in prehistory. This farmstead also provides evidence of farming activity with part of the buildings used as a byre with a central drain and field systems showing arable rig and furrow cultivation remains. Similarly, the farmstead at Knockoner Burn (WoSAS Pin 6128) (**HA88**) contains two long buildings with cultivation remains that may have Medieval origins.
53. Elsewhere, the Baing Homestead (WoSAS Pin 7199) (**HA73**) consists of a single building within an enclosure that is likely to have contained livestock. More substantial livestock enclosures are known at Knockinculloch Enclosures (SM3357) (**HA89**) where a large area has been enclosed by a bank, which contains a further nine, smaller P-shaped enclosures that are likely to have been for the penning of animals.
54. Finally, the Pheelie Farmstead (WoSAS Pin 11571) (**HA101**) provides further evidence for the popularity of long houses during the Medieval period, but also shows the abundance of activity that was taking place within these small family settlements. This farmstead sits outside a large D-shaped enclosure that probably relates to the penning of livestock, but is also surrounded by rig and furrow cultivation, and has a nearby kiln.

10.5.3.4 Post-Medieval

55. 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. A commemorative stone at Linfairn Farm (WoSAS Pin 6131) (**HA83**) and a gravestone within Straiton churchyard (LB19089) (**HA53**) provide local evidence of the fallout from the period of the Covenanters control of Scotland. A local supporter of the group, Thomas McHaffie, was executed at Linfairn Farm in 1686, and the stone and grave marker have been erected in memory by some who believe he was a martyr.
56. The castles and estates throughout Scotland were being reorganised and modernised during the Post-Medieval period, with the former motte and bailey castles replaced by larger ornate towers, castles and mansion houses, with many of these changes taking place in the 16th and 17th centuries. Examples can be seen in the estates within the northern half of the Study Area. Kirkmichael House (LB13654) (**HA30**), Kilhenzie Castle (LB14305) (**HA33**), Cloncaird Castle (LB7557) (**HA38**), Blairquhan House (LB19094) (**HA46**), Brunston Castle (LB6705) (**HA82**), and Bargany House (LB1171) (**HA91**) all have their origins in the 16th and 17th centuries. Changes to the older estates and castles are also recorded during this period with elements of designed landscapes being included within the Medieval estates of Blairquhan (GDL00063) (**HA43**) and Dalquharran (WoSAS Pin 53485) (**HA69**).
57. 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. Two long buildings at Gass (**HA45** & **HA49**), and the much better preserved Munteoch Settlement (SM5200) (**HA63**) are evidence of the settlement and agricultural activity taking place in the area. As with the settlements of the Medieval period, the farmstead shows a mixture of agricultural activity with livestock enclosures and cultivation remains surrounding the area, and industrial activity being conducted nearby.
58. 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 new field divisions were created by long stretches of drystone wall, with evidence of these walls still in existence throughout the Site Boundary (**HA97**, **HA100**, **HA102**, and **HA104**) (**Plate 10.1**). Smaller livestock enclosures or sheep rees were created throughout the upland areas to help corral the animals when needed, with two examples evident within the Site Boundary (**HA93**, and **HA99**) (**Plate 10.2** & **Plate 10.3**) and several others in the immediate surroundings. The livestock pens are often placed adjacent to drove roads and paths through the hills such as the Linfairn to Burnside Footpath (**HA95**), and are often associated with small shielings and other buildings used by the shepherds for shelter.



Plate 10.1: General view of Stob Hill Walls (**HA101**)



Plate 10.2: General view of Fell Sheep Ree (HA 92)



Plate 10.3: General view of Stob Hill Sheep Ree (HA98)

59. 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 demolished and ploughed over. These abandoned farmsteads are evident from the Medieval and later settlements described previously. Even some of the newer farmsteads created in the late 18th century struggled to survive with the Glenshalloch Farmstead (WoSAS

Pin 5449) (**HA59**), Quarrel Hill Farmstead (WoSAS Pin 5453) (**HA65**) and Glengennet Farm (WoSAS Pin 11568) (**HA111**) all being abandoned in the 19th century.

60. Within the estates in the area, the late 18th century saw a greater uptake in the creation of designed landscapes and gardens surrounding the established houses and castles, with some of the older buildings being left to ruin to form part of the design such as at Dalquharran where a new castle or mansion house (LB125) (**HA74**) was created to the north of the former castle and the rest of the estate formed designed woodland and parkland areas (WoSAS Pin 53485) (**HA69**). Similar upgrades were made to the estates at Kilhenzie (WoSAS Pin 53491) (**HA32**), Kirkmichael (WoSAS Pin 53490) (**HA34**), Craigengillan (GDL00111) (**HA61**), and Kilkerran (GDL00238) (**HA67**). The latter two estates are examples of exquisite gardens and designed landscapes that were continually improved and added to throughout the 18th, 19th and 20th centuries, with the house at Kilkerran (LB1114) (**HA66**) also extended and added to during this time.
61. New estates were also being established during the 18th century including the estate at Balclatchie (WoSAS Pin 53517) (**HA107**) that was formed around the former farmstead, with rig and furrow cultivation areas transformed into parkland and woodland planting. Other notable buildings from this period include the cottages at Parkfairn (LB50005) (**HA44**) and Auchensoul (LB4878) (**HA119**), as well as a Dovecot at Drumfad (LB7558) (**HA35**) that may have been part of the Cloncaird estate. This period also saw the beginnings of small villages within the Study Area, focussing around the established church at Straiton (LB19089) (**HA53**), which was rebuilt in 1758, and the newly constructed church at Dailly (LB1139) (**HA79**). The Straiton village begins to expand in the late 18th century with the Black Bull Inn (**HA55**) and Traboyack House (former manse) constructed within the village, and the rest of the village laid out in 1900 that form the current Conservation Area (CA92) (**HA54**).
62. Village expansion in the general area continues in the 19th century, with the manse (LB1140) (**HA77**) and hotel (LB1141) (**HA80**) at Dailly adding architecturally significant buildings to the village. The village of Kirkmichael becomes established at this time with a long row of cottages constructed on either side of Patna Road (**HA1-HA14 & HA16-HA29**) that runs through the centre, and forms the focal point for the Conservation Area (CA88) (**HA15**). Crosshill (CA84) (**HA42**), and Barr (CA80) (**HA115**) are also established in the 19th century, with all of these villages focussed around watercourse crossings and on the edge of large estates.
63. These estates continue to be redeveloped throughout the 19th century, with improvements made to Blairquhan (GDL00063) (**HA43**) and Bargany (GDL00047) (**HA87**) estates. Cloncaird Castle (LB7557) (**HA38**) was rebuilt in 1814 around the earlier 16th century core, with stables and boundary wall (LB11740) (**HA37**) added to the estate in the 19th century and garages (LB50618) (**HA36**) constructed in the 20th century. Furthermore, the new estate of Kirkbride House (WoSAS Pin 53487) (**HA57**) was established within parkland and woodland to the east of Balsaggart farm and mill, and the Alton Albany country house (LB1036) (**HA118**) and lodge (LB101) (**HA116**) to the south west of Barr. Several other small cottages and houses were constructed within the mainly rural landscape including the cottages at Longhill (LB7556) (**HA47**) and Lochmodie (LB1144) (**HA72**).
64. Most notable from the mid-19th century were the erections of two monuments to local lords and peers from the area, both of which were established on top of high summits overlooking the nearby villages and estates they were associated with. The first of these was erected in 1853 on Kildoon Hill in memory of Sir Charles Fergusson (LB14277) (**HA40**), with views over Kirkmichael and Crosshill to the east and Maybole to the north. The second monument was erected in 1854 to Colonel James Hunter Blair (LB19104) (**HA62**) on Highgate Hill and overlooks the village of Straiton and the estate of Blairquhan.

10.5.3.5 Modern

65. Into the 20th century the landscape within the Site Boundary would have been similar to the preceding century with a gradual decline in agricultural activity, leading to the abandonment of the agricultural structures that were put in place. The latter half of the 20th century would have seen the establishment of the commercial forestry plantations that are prevalent today.
66. Elsewhere within the Study Area, the landscape remains relatively unchanged with the landscape consisting of upland and lowland agricultural activity. Village expansion continues to a certain extent with Straiton having a number of small cottages constructed along Main Street (LB19091) (**HA52**) & (LB19092) (**HA56**), in the early 20th century, and a telephone kiosk (LB19106) (**HA51**) erected in the town that is still in use today.

10.5.3.6 Historic Map Regression

67. The first maps to depict the Site are the maps of the 17th century and all show Loch Spaig (now Linfern Loch) with settlements annotated at Blackrow to the south and Knockonyr to the north (Blaeu 1654).

68. Baillie's 18th century map (Baillie 1774) depicts the loch and the area surrounding it as marshland, with no further detail on any possible activity within the Site. More detailed maps of the early 19th century present a similar picture to the 18th century maps with Loch Spaig sitting in isolation from any potential habitation evidence. The detail provided by the Ordnance Survey 1st Edition (1856) is the first map to provide evidence of upland agricultural activity with the sheep rees, pathway and the drystone walls of the Site Boundary depicted.
69. The Ordnance Survey maps of the late 19th to mid-20th century depict a similar picture to that of the mid-19th century with very little activity out with the livestock pens, walls and pathway. The commercial forestry plantations that now dominate the Site have begun to be planted in the mid-20th century to the east and south west, and the area containing the Site is planted in the decades that follow and is still used for commercial forestry today.
- 10.5.3.7 Archaeological Potential**
70. The summary of the baseline has shown that the Study Area contains archaeological sites and evidence dating from the Prehistoric to the Modern day. All of the heritage assets within the Site Boundary relate to Post-Medieval agricultural activity and pastoral farming activities. The previous afforestation of the Site has truncated field boundary walls and parts of the other agricultural features. The map regression has shown that the area has seen little recent human activity despite the existence of notable heritage assets on the fringes.
71. Therefore, given the previous afforestation and the current and historic landscape of the Proposed Development as an upland 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 low.

10.6 Potential Effects

72. It is considered that those heritage assets that are in relatively close proximity to the Proposed Development may potentially be significantly affected by direct physical impacts and indirect impacts on their setting. As such, detailed assessments have been undertaken for all assets within the Site Boundary.
73. All heritage assets scoped into the assessment within the Study Area have been deemed to be of high or medium value as designated heritage assets or undesignated heritage assets of either regional or national significance. They all have some degree of theoretical visibility of the Proposed Development, and may potentially be significantly affected through indirect impacts on the visual setting of the heritage asset. As such, detailed assessments have been undertaken for all heritage assets listed within **Appendix 10.6 Archaeology and Cultural Heritage Gazetteer**.
- 10.6.1 Mitigation by Design and Embedded Mitigation**
74. 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 which minimise cut and fill.
75. The early identification of heritage assets within the Site Boundary has enabled changes in the design to be made to ensure that the high concentration of heritage assets within the northern portion of the Site Boundary can be avoided, including the Scheduled Monument of Knockinculloch Enclosures (SM3357). These changes ensure that wind turbines and other infrastructure would not directly impact upon this area.
76. The identification of the Bencallen Hill Chambered Cairn (SM3890) (**HA114**) on the western edge of the Site Boundary also led to design changes to remove any possibility of direct impacts, and to reduce the probability of any indirect impacts on the setting of the cairn. The setting of the Kilkerran GDL (GDL00238) (**HA67**) was also a key consideration during the design with potential views from the B741 influencing the wind turbine locations.

77. Other 'embedded mitigation' that helps to reduce the indirect impacts on the setting of the heritage assets is the consideration given to the appearance, finish and colour of the wind turbines, Proposed Development substation and other buildings in accordance with NatureScot Guidance² (SNH, 2017).

10.6.2 Construction

78. 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 or other historic developments, have the potential to directly impact upon heritage assets. Such activities include, but are not limited to, excavations for wind turbine bases and crane hard standings, other hard standings, access tracks, cable routes, temporary construction compounds, Proposed Development substation infrastructure, and borrow pits.
79. 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.
80. The construction effects on the setting of heritage assets are unlikely to be significant in nature, due to the temporary nature of these works. The construction phase assessment considers the temporary effects of the construction activities.
81. The assessment of operational effects on the setting of the heritage assets within the Site Boundary is detailed in **Appendix 10.2 Heritage Assets within the Site Boundary**. The assessment of construction related effects has been carried out below 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**. Five of the known heritage assets identified within the Site Boundary have the potential to be directly impacted upon during construction as they lie within the construction footprint of various elements of the Proposed Development.

Linfairn to Burnside Footpath (HA95)

82. Linfairn to Burnside Footpath (**HA95**), a heritage asset of Low value due to being of local importance, has the potential to be directly impacted upon by the upgrades to the existing forestry tracks and works related to borrow pit excavations. As the potential impact would truncate parts of the footpath (if it still exists in these locations) such that it is slightly altered, the magnitude of impact is deemed to be Minor Adverse. Therefore, the overall significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Linfirn Loch Wall (1) (HA97)

83. Linfirn Loch Wall (1) (**HA97**), a heritage asset of Negligible value due to being of little historic interest, has the potential to be directly impacted upon by the creation of new access tracks for wind turbine 8. As the potential impact would probably remove the wall in its entirety, the magnitude of impact is deemed to be Major Adverse. Therefore, the overall significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Stob Hill Sheep Ree (HA99)

84. Stob Hill Sheep Ree (**HA99**), a heritage asset of Low value due to being of local importance, has the potential to be directly impacted upon by the upgrades to existing forestry tracks as well as the creation of new access tracks. As the potential impact would truncate or totally remove the sheep ree, the magnitude of impact is deemed to be Major Adverse. Therefore, the overall significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Linfirn Loch Wall (2) (HA100)

85. Linfirn Loch Wall (2) (**HA100**), a heritage asset of Negligible value due to being of little historic interest, has the potential to be directly impacted upon by the borrow pit excavations to the south west of wind turbine 8. As the potential impact would truncate parts of the wall such that it is slightly altered, the magnitude of impact is deemed to be Minor Adverse. Therefore, the overall significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

Stob Hill Walls (HA102)

86. Stob Hill Walls (**HA102**), a heritage asset of Negligible value due to being of little historic interest, has the potential to be directly impacted upon by the new access tracks to wind turbine 13. As the potential impact would truncate parts of the wall such that it is slightly altered, the magnitude of impact is deemed to be Minor Adverse. Therefore, the overall significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

² Formerly known as Scottish Natural Heritage (SNH).

87. The final asset of Stinchar Ford Wall (HA104) is located out with the footprint of construction for the Proposed Development as shown in **Figure 10.1 Heritage Assets – Site Boundary**. However, an element of ‘embedded mitigation’ for the design and construction of the Proposed Development has the potential to introduce direct physical impacts on this heritage asset. 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 which would be carried out post-consent. The wall lies within the 50m micro-siting buffer surrounding the access tracks to wind turbine 11 and access tracks to wind turbine 13.

Stinchar Ford Wall (HA104)

88. Stinchar Ford Wall (**HA104**), a heritage asset of Negligible value due to being of little historic interest, has the potential to be directly impacted upon by micro-siting during the upgrades to the existing forestry tracks. As the potential impact would truncate parts of the wall such that it is slightly altered, if micro-siting relocated the new access tracks, the magnitude of impact is deemed to be Minor Adverse. Therefore, the overall significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

89. As well as the effects on known heritage assets, there is also the potential for direct impacts on currently unknown, subsurface archaeological remains during construction. 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 any potential 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** (i.e. not significant in EIA terms).

10.6.3 Operation

90. The Proposed Development has the potential to indirectly impact upon heritage assets within the Site Boundary and Study Area. The assessment of operational impacts and effects on the setting of heritage assets has been carried out with reference to the wind 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**.

91. 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 and WoSAS. The table below 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	Viewpoint type	Viewpoint Number	Figure Number	Easting/Northing
HA89	Knockinculloch Enclosures	This viewpoint is located in the centre of the Knockinculloch Enclosures Scheduled Monument, on sloping, tree-less ground at the edge of a commercial forestry plantation. Open views are available to the south east and over the recently felled forestry to the east. Views to the north, west and south are dominated by the presence of a commercial forestry plantation. The wireline illustrates that the wind turbines from the Proposed Development would be visible in immediate views over the forestry to the west and in more distant views to the south.	25	Figure 10.5	234264, 600518
HA67	Kilkerran GDL	The viewpoint is located on the northern corner of the Kilkerran GDL at the junction	26a	Figure 10.6	230376, 604262

Site	Site Name	Viewpoint type	Viewpoint Number	Figure Number	Easting/Northing
		between the B741 and the local road to Auchalton Toll. Views to the north and west are of mature woodland lining the road, with open and extensive views into the GDL to the south, and to the east. The wireline illustrates there is no visibility of the Proposed Development from this location.			
HA67	Kilkerran GDL	The viewpoint is located to the east of Aird Bridge that carries the B741 over the Water of Girvan at the north western edge of the Kilkerran GDL. Open views are available on all sides with views into the GDL incorporating Kilkerran House to the south east. The wireline illustrates there is no visibility of the Proposed Development from this location.	26b	Figure 10.7	229460, 604262
HA71	Baing Loch Chambered Cairn	The viewpoint is located on the Baing Loch Chambered Cairn, in an upland moorland landscape at the head of the Chapel Burn. Commercial forestry is present to the immediate east. Views to the south and west are curtailed by the adjacent hills of the Big Hill of Baing and Trostan Hill respectively. The wireline illustrates that ten of the hubs from the Proposed Development would be visible in wide views down the Chapel Burn, with two sets of blade tips visible beyond the slopes of Big Hill of Baing. The infrastructure from the proposed Craiginmoddie and Knockcronal Windfarms would also be visible as a tight cluster within these views.	27	Figure 10.8	241285, 602700
HA117	Pinbreck Hill Cairn	The viewpoint is located on the summit of Pinbreck Hill at a height of 499m AOD. There is steep sloping ground on all sides except the south east where the ridge line connects to a lesser summit. Higher ground curtails views to the south but open views are available in all other directions, with picturesque views available towards the River Stinchar Valley and beyond to the coast. The wireline illustrates that all 13 hubs will be visible from this summit, with the proposed Knockcronal Windfarm to the rear. The operational Dersaloch Windfarm	28	Figure 10.9	234800, 593710

Site	Site Name	Viewpoint type	Viewpoint Number	Figure Number	Easting/Northing
		is also visible in distant views in the background.			
HA68	Mote of Doonan's Dun	The viewpoint is located on the lesser Summit of Doonan's Hill with the peak to the south west and steep sloping ground to the north and west. Views to the north east are dominated by the infrastructure from the operational Dersalloch Windfarm – these are not presented within the viewpoint. The wireline illustrates that six wind turbines of the Proposed Development would be visible beyond the southern slopes of Doonan's Hill summit, with two sets of blade tips visible over the top of the hill fort on the summit.	29	Figure 10.10	239580, 602905
HA94	Maxwellston Hill Fort	The viewpoint is located at the eastern edge of Maxwellston Hill Fort, situated on the western edge of summit of Maxwellston Hill. Steep sloping ground is present to the north and west with open and extensive views available of Bargany GDL, the town of Dailly, and beyond to the coast and the Isle of Arran. Views to the south and south east contain the infrastructure of the operational Hadyard Hill Windfarm. The wireline illustrates that that elements of at least ten hubs would be visible in distant views to the south east. The infrastructure of Craiginmoddie Windfarm would filter these views due to its proximity to the Fort, alongside the adjacent operational Hadyard Hill Windfarm.	30	Figure 10.11	225960, 598969
N/A	Loch Doon PIC	The viewpoint is located on the western slopes of the Coran of Portmark, overlooking Loch Doon and the re-erected Loch Doon Castle. From this area of higher ground there are extensive views of Loch Doon and the hills beyond to the north and north west, with the operational Dersalloch Windfarm present in these distant views. The wireline illustrates that the infrastructure from the Proposed Development would be visible in distant views over the hills to the north west with three wind turbine hubs and	31	Figure 10.12	250473, 593510

Site	Site Name	Viewpoint type	Viewpoint Number	Figure Number	Easting/Northing
		seven sets of blades appearing over the edge of the distant ridgeline.			
HA30	Kirkmichael House	The viewpoint is located on Kirkmichael House, situated on level ground within a designed landscape, with forestry to the immediate north and west, and a pond to the south. Open views are available to the west. The wireline illustrates that elements of the Proposed Development would be visible in distant views to the south, with seven sets of blades likely to be screened by localised vegetation and to the rear of Knockcronal Windfarm. The Craiginmoddie Windfarm is also located to the east.	32	Figure 10.13	234088, 608440
HA74	Dalquharran Castle	The viewpoint is located on Dalquharran Castle, situated on an area of raised ground within a designed landscape. The castle has views overlooking the parkland and woodland of the estate to the south, with more immediate internal views of the courtyard and stables to the north west. Elements of the operational Hadyard Hill Windfarm are visible to the south. The wireline illustrates that very few elements of the Proposed Development infrastructure would be visible in distant views to the south east. The infrastructure of Craiginmoddie Windfarm would be more prominent in the same view, partially screening the Proposed Development.	33	Figure 10.14	227055, 602161
HA61/HA50	Craigengillan GDL/Auchenroy Hill Cairn	The viewpoint is located within a clearing on the summit of Auchenroy Hill, at the north western corner of Craigengillan GDL. The hill overlooks the town of Dalmellington to the east and the River Doon Valley stretches in views from the north east to south east. The wireline illustrates that the operational Dersalloch Windfarm is present in views to the west and south west, and all 13 wind turbines of the Proposed Development would be visible in distant views to the south east to the rear of Knockcronal Windfarm.	34	Figure 10.15	245000, 605050

Site	Site Name	Viewpoint type	Viewpoint Number	Figure Number	Easting/Northing
HA43/HA46	Blairquhan GDL	The viewpoint is located on Kings Hill, situated in the northern parkland of the Blairquhan GDL. The hill provides views over the wooded valley of the Water of Girvan to the west, with open and picturesque views over the meandering river to the south. The wireline illustrates that the blade tips of all 13 wind turbines and five hubs would be visible just above the ridgelines of Glenalla Fell and Halfmark Rig to the south. The proposed Craiginmoddie Windfarm would be in this viewshed as a more clustered group of wind turbines to the east and the Knockcronal Windfarm would be visible in front of the Proposed Development.	35	Figure 10.16	236572, 606564
HA87	Bargany GDL	The viewpoint is located within the north parkland of Bargany GDL, to the south of Bargany Mains Farm. The location allows for internal views of the parkland and woodland, as well as views of the hills beyond to the south east, dominated by the steep slopes of Hadyard Hill and Maxwellston Hill. The wireline illustrates that the very top of two blades and two hubs would be visible from the Proposed Development beyond the eastern slopes of Hadyard Hill. The infrastructure of Craiginmoddie Windfarm would sit in the foreground of this view.	36	Figure 10.17	224325, 600802

Table 10.6 Summary of Heritage Asset Viewpoints

92. All of the 120 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 Wind Turbine Locations**, and **Appendix 10.4 Heritage Assets between 5km and 10km of the Wind Turbine Locations**.
93. In relation to the indirect impacts from the operation of the Proposed Development 83 of the 120 heritage assets within the baseline were assessed as having a potential **Neutral** significance of effect, 36 were assessed as having a potential **Slight Adverse** significance of effect, and one was assessed as having a potential **Moderate Adverse** significance of effect.
94. Of the heritage assets highlighted by the consultees, the following have been scoped-out of further assessment as they are not within the ZTV of the Proposed Development or have limited visibility and are at a distance from the Proposed Development that would result in no change in setting:
- Mote Knowe, motte, Kilkerran (SM2863);
 - Culzean Castle (GDL00124);
 - Turnberry Hotel (LB7618 – Category B Listed Building); and

- Waterside, Dalmellington Ironworks (Dunaskin) (SM4345).

95. The Category A Listed Buildings of Kilkerran House (LB1114) (HA66) and Blairquhan House (LB19094) (HA46) form an integral part of the GDL's within which they sit, and despite having no visibility of the Proposed Development from their respective locations, have been assessed as individual heritage assets due to the potential for impacts on views towards them from locations within and surrounding the GDL's.

The following discussion addresses those assets identified by HES and the other consultees during the scoping response that are located within proximity to the Site Boundary, alongside a selection of other heritage assets that represent the various designations within the baseline. A full discussion of all assets is presented in:

- **Appendix 10.2 Heritage Assets within the Site Boundary;**
- **Appendix 10.3 Heritage Assets within 5km of the Wind Turbine Locations;** and
- **Appendix 10.4 Heritage Assets between 5km and 10km of the Wind Turbine Locations.**

10.6.3.1 Scheduled Monuments

Knockinculloch Enclosures (SM3357) (HA89)

96. The enclosures are located in an upland landscape, situated on the south east flank of Knockinculloch Hill. They are set within a clearing surrounded by commercial forestry plantation on all sides with felling and planting operations ongoing. It is possible that key views are more relevant to the contemporary social context of the enclosures: that the immediate uplands and views down slope towards settlement activity was the greater focus for the community that constructed and used these structures. Evidence of sheiling huts (WoSAS ID 6148) alongside evidence of peat cuttings (WoSAS ID 12755) characterise the hillsides surrounding the enclosures as having been an active transient working environment.

97. The enclosures occupy the lower south eastern slopes of Knockinculloch, overlooking the Palmullan Burn and its tributaries. Key views likely relate to the upland setting in which they are situated. The proximity to other contemporary heritage assets associated with upland agricultural activity and transient settlement also contribute to the current setting, none of which appear evident or prominent in the landscape. Wider views to the south and south east incorporate and absorb the large-scale commercial forestry plantations and the higher ground of Carrick and Merrick. The blade tips and hubs of the Proposed Development would be visible in immediate views to the south and more distant views to the south east (see **Figure 10.5 Viewpoint 25: Knockinculloch Enclosures**).

98. The magnitude of impact has been assessed as Moderate Adverse to an asset of High value, with considerable changes to setting with the introduction of blade tips and hubs into views to the south east that may be interpreted as key views due to their open nature. The changes would be in the context of a backdrop of commercial forestry and intervening localised vegetation which may have minor impacts on these views from various locations around the enclosures. These changes are unlikely to impact on the ability to understand the fabric and nature of the enclosures but may impact upon the ability to appreciate them within the upland landscape within which they are situated. As such the significance of effect has been assessed as **Moderate Adverse** (i.e. significant in EIA terms).

Maxwellston Hill Fort (SM2201) (HA94)

99. The fort is located on the summit of Maxwellston Hill, to the south west of Dailly, and is flanked by the summits of Hadyard Hill to the east and Green Hill to the south. The fort has steep sloping ground to the immediate north and west with more level ground toward Hadyard Hill to the west and towards Penwhapple Reservoir to the south. Infrastructure of the operational Hadyard Hill Windfarm is located less than 1km to the south with wind turbines in immediate views from the south west through to the east. Key views relate to views to and from the entrances in the east and north east, as well as dominant views to the north and west overlooking the flood plain of the Water of Girvan and distant views to the coast. Current views to the east already incorporate the infrastructure from the operational Hadyard Hill Windfarm and the commercial forestry plantations of Carrick Forest. The blade tips and hubs of the Proposed Development would only be visible from the eastern half of the fort and would slightly add to the array of wind turbines from the Hadyard Hill Windfarm (see **Figure 10.11 Viewpoint 30: Maxwellston Hill Fort**).

100. The magnitude of impact has been assessed as Minor Adverse on an asset of High value, with slight changes to setting with the introduction of blade tips and hubs within distant and peripheral views to the east. These views may be impacted upon by localised vegetation and the changes would not impact on the ability to understand and

appreciate the fort and its dominant position over the Water of Girvan. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Bencallen Hill Chambered Cairn (SM3890) (HA114)

101. The chambered cairn is located within a clearing at the edge of the commercial forestry plantation of Carrick Forest, on the south west facing slopes of Bencallen. The cairn is incorporated into a large set of Post-Medieval livestock enclosures with open views to the south west towards Balloch Hill and north west along the Balloch Burn. Current views to the north east are curtailed by the slopes of Bencallen and the commercial forestry plantation covering them. The single blade tip would likely be imperceptible given the topography and intervening vegetation with only the south western edge of the scheduled area providing visibility of the infrastructure.
102. 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 from a single hub screened by localised vegetation. As such the significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

10.6.3.2 Category A-Listed Buildings

Blairquhan House (LB19094) (HA46)

103. Blairquhan House is situated in the southern half of the Blairquhan GDL, some 8km south east of the town of Maybole in Ayrshire, and to the west of the village of Straiton. The house stands on the southern escarpment of the Vale of the Water of Girvan which meanders through a wide valley. Mature woodland shelters the house to the west and south east, but views to the north and north east across the river valley are obtained from the house. The best views of the house and park are obtained from the north, with the views from the south obscured by woods along the roadside. Immediate views to the south incorporate the garden with fountain and look towards an avenue of trees at the edge of Broad Wood. Views further south from the house are obscured by the topography and vegetation of the designed landscape. The house itself has no views of the blade tips and hubs of the Proposed Development. However, the blade tips and hubs of the Proposed Development would be visible in the background of views towards the house from the northern portion of the estate (see **Figure 10.16 Viewpoint 35: Blairquhan (from Kings Hill)**).
104. The magnitude of impact has been assessed as Negligible Adverse on an asset of High value, with very minor changes to setting with the introduction of blade tips and hubs within a single viewpoint towards the house in views from the north. These views may be impacted upon by localised vegetation and the changes would not impact on the ability to understand and appreciate the character and setting of the house. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Kilkerran House (LB1114) (HA66)

105. Kilkerran House is situated near the centre of the Kilkerran GDL, set in the valley of the Water of Girvan some 7km south of Maybole and 3km north east of Dailly. The house is orientated north west to south east with the front of the house and the north east gable overlooking the flat parkland of the valley. The mature woodland of Highmains Wood and Cockston Wood shelter the house on the southern side. Key views include extensive views along the valley across the open parkland, and views of the house sitting within the parkland are visually significant from the B741. Views of the house sitting within the designed landscape can also be obtained from the hills to the north. Views to the south from the house are obscured by the steep topography of Barony Hill and Cairn Hill. Distant views of the house from the hills to the north may include the blade tips and hubs of the Proposed Development but are unlikely to impact on the viewshed down towards the house. The introduction of blade tips and hubs would have no impact on views from within the policies or from the B741 towards the house (see **Figure 10.6 Viewpoint 26a: Kilkerran (B741) and Figure 10.7 Viewpoint 26b: Kilkerran (B741 – East of Aird Bridge)**).
106. 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 from views towards the house from the hills to the north. As such the significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

Dalquharran Castle (LB125) (HA74)

107. The castle is set within the southern half of the Dalquharran estate to the north of the village of Dailly. It sits upon a prominent position within the estate overlooking the parkland and woodland of the estate to the south, with more immediate internal views of the courtyard and stables to the north west. Elements of the operational Hadyard Hill Windfarm are visible to the south. Key views from the castle are probably across the parkland to the east as well as views along the Water of Girvan Valley to the east, south and south west. The reciprocal views with the old

Dalquharran Castle would also be important. The current views to the south east include elements of the designed landscape within which it sits as well as the valley of the Water of Girvan and the agricultural landscape beyond. Distant views in this direction are dominated by Doughty Hill and the commercial forestry plantations on the slopes. The blade tips and hubs of the Proposed Development would be visible in distant views from the castle, over the western slopes of Doughty Hill, with the potential for intervening localised vegetation to filter these views (see **Figure 10.14 Viewpoint 33: Dalquharran Castle**).

108. The magnitude of impact has been assessed as Negligible Adverse on an asset of High value, with very minor changes to setting with the introduction of blade tips and hubs within distant views to the south east. These changes are unlikely to impact on the ability to understand and appreciate the castle and its setting. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Bargany House (LB1171) (HA91)

109. The house is located approximately 3km to the south west of the village of Dailly and is set within the estate garden and designed landscape, standing at the edge of the woodland garden in parkland on the south bank of the Water of Girvan. Key views are likely to relate to views towards the house from various location within the designed landscape, as well as views from the castle towards the Water of Girvan Valley to the north and north east. Views to the east and south east are dominated by the slopes of Hadyard Hill and other upland areas beyond that contain the Carrick Forest. The blade tips from a single wind turbine would be almost imperceptible from the house given the distances and the significant intervening, localised vegetation adjacent to the house and within the estate.
110. The magnitude of impact has been assessed as No Change on an asset of High value, with no changes to setting with the introduction of blade tips from a single wind turbine likely filtered or screened by the localised vegetation. As such the significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

10.6.3.3 Garden and Designed Landscapes

Blairquhan (GDL00063) (HA43)

111. Blairquhan is situated in upland country, some 8km south east of the town of Maybole in Ayrshire. It lies to the west of the village of Straiton and the policies today extend from the woods along the B741 in the south, across the Water of Girvan, and include the parkland and afforested knowes on the south face of the valley up to the B7045. The house stands on the southern escarpment of the Vale of the Water of Girvan which meanders through a wide valley. The surrounding landscape is largely agricultural with some afforestation on the hills, particularly to the north east of Blairquhan. Views to the north and east across the river valley are obtained from the house. The best views of the house and park are obtained from the north, with the views from the south obscured by woods along the roadside. Scienteuch Moor, Specs and Littleton Glen plantations are also areas of afforestation out with this boundary but important outlying features of the designed landscape. Finally, the north drive is an important feature of the design and follows the route of the river Girvan for several kilometers, crossing it by the William Burn bridge. Views to the south incorporate the upland areas containing the Carrick Forest with commercial forestry plantations a dominant feature on the slopes. The blade tips and hubs of the Proposed Development would be visible over ridge lines to the south, with greater visibility further north within the policies (see **Figure 10.16 Viewpoint 35: Blairquhan (from Kings Hill)**). A large area in the south of the policies have no visibility including the area around Blairquhan Castle and the other historic buildings, as well as a large part of the new extension to the north west.
112. The magnitude of impact has been assessed as Minor Adverse on an asset of High value, with slight changes to setting with the introduction of blade tips and hubs within distant views to the south. These views may be impacted upon by localised vegetation and the changes would not impact on the ability to understand and appreciate the policies of the GDL. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Kilkerran (GDL00238) (HA67)

113. Kilkerran is situated in the valley of the Water of Girvan some 7km south of Maybole and 3km north east of Dailly, and is bounded by the B741 to the north and by the policy woodlands to the south. The river flows through the estate and is joined by several tributaries flowing down from the hills to the south, including the Toddy Burn which flows just to the west of the house. The several bridges crossing the river and burns add to the architectural interest of the estate. The moorland hills to the south rise to around 300m; the lower slopes are forested, the several burns cutting through the red sandstone rock to form cascades and waterfalls. The underlying rocks are Carboniferous and there are several abandoned quarries in the area for whinstone, and a colliery to the north at Dalzellowie. Key views include extensive views along the valley across the open parkland, and the parkland is visually significant

from the B741. A view of the whole designed landscape can be obtained from the hills to the north. Views to the south from the designed landscape are dominated by the moorland hills with distant views of the Carrick Forest beyond only available from the far south east corner. The introduction of blade tips and hubs would have no impact on views from within the policies or from the B741 (see **Figure 10.6 Viewpoint 26a: Kilkerran (B741)** and **Figure 10.7 Viewpoint 26b: Kilkerran (East of Aird Bridge)**). Views over the designed landscape from the hills to the north already incorporate the infrastructure related to the operational Hadyard Hill Windfarm in distant and peripheral views to the south and south west. The additional blade tips and hubs from the Proposed Development would slightly add to this array of wind turbines in distant and peripheral views to the south east.

114. 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 additional blade tips and hubs from views over the designed landscape from the hills to the north. These changes are unlikely to impact on the ability to understand and appreciate the designed landscape. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Bargany (GDL00047) (HA87)

115. Bargany House stands on the south bank of the Water of Girvan some 3km south west of the village of Dailly. The designed landscape is mainly set within the valley of the Water of Girvan. The surrounding landscape is rolling agricultural land, apart from the disused coalmine of Killochan in the north east. Views are gained from the south across the park whilst, from the north, the woodland borders the policies from the B741, the B7035, and from the railway which was laid through the woodlands in the early 19th century. To the west, the policies extend to Cairnhill and Lovestone Plantations and include Brunston golf course and Brunston Castle holiday resort in the east. The main entrance, the east drive, runs through Blackwood Plantation, crosses the old road and skirts the edge of the pond and thence through the woodland garden to the house. Key views are probably from the south over the parkland, along with internal views along the driveway, and views to and from Bargany House from various locations within the designed landscape. Current views to the east and south east are curtailed by the hills of Maxwellston Hill and Hadyard Hill to the south east, with The Pilot and other hills containing Carrick Forest in more distant views available to the east. The blade tips and hubs from the Proposed Development are not visible from most of the southern half of the policies due to the adjacent topography blocking distant views. The infrastructure is more visible from the northern half of the policies and mainly to the north of the Water of Girvan (see **Figure 10.17 Viewpoint 36: Bargany House GDL**). The majority of these views would be impacted upon by the dense woodland plantations along the northern edge that divide the parkland areas.
116. The magnitude of impact has been assessed as Negligible Adverse on an asset of High value, with very minor changes to setting with the introduction of blade tips and hubs within distant views to the east and south east. These views would be impacted upon by localised vegetation and the changes would not impact on the ability to understand and appreciate the policies of the Garden and Designed Landscape. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

10.6.3.4 Ayrshire Designed Landscapes

Kirkbride House (WoSAS Pin 53487) (HA57)

117. The designed landscape is located to the south east of Crosshill Village, incorporating the Balsaggart Burn to the south west and the B741 running through the northern half of the estate. The immediate surroundings include mature tree cover related to the Kirkbride and Balsaggart Glens and the surrounding pastoral field systems in all directions. Key views include internal views between the various elements of the designed landscape and wider views to the north including views towards Crosshill Village and other low-lying areas. Views to the south are mainly obscured by the higher ground of the designed landscape, but from these areas of higher ground there are views towards the Black Hill of Knockgardner and Clauchrie Hill and the commercial forestry plantations beyond. The introduction of blade tips and hubs to the south would be curtailed by localised topography and vegetation, and large portions of the designed landscape would have no visibility of the Proposed Development.
118. The magnitude of impact has been assessed as Negligible Adverse to an asset of Medium value, with very minor changes to setting with the introduction of additional blade tips and hubs in the context of commercial forestry. Intervening and localised topography and vegetation would likely impact on these views. These changes are unlikely to impact on the ability to understand and appreciate the designed landscape. As such the significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

Kilhenzie (WoSAS Pin 53491) (HA32)

119. The designed landscape is located to the south of Maybole and is focussed around Kilhenzie Hill with the historic buildings of Kilhenzie Castle and the farmstead on the lower ground to the south next to Kilhenzie Burn. Formal gardens remain surrounding the castle with the remainder of the former estate consisting of arable and pastoral agricultural fields with the modern farm infrastructure dominating the southern edge. Key views are probably east from the entrance to the estate toward the castle and potential views from the higher ground looking south over the castle gardens, although this view is now backdropped by the modern farm buildings. Immediate views south east are dominated by the agricultural landscape within which the designed landscape sits with distant views incorporating the hills containing Carrick Forest. The blade tips and hubs would be visible in these distant and peripheral views with the southern edge next to the burn having no visibility. Localised vegetation is likely to impact on some of these views.
120. The magnitude of impact has been assessed as Negligible Adverse on an asset of Medium value, with very minor changes to setting with the introduction of blade tips and hubs within distant and peripheral views to the south east. These views may be impacted upon by localised vegetation and the changes would not impact on the ability to understand and appreciate the designed landscape. As such the significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

Kirkmichael House (WoSAS Pin 53490) (HA34)

121. The designed landscape is located to the immediate south and south west of Kirkmichael village with the meandering Water of Girvan forming the southern boundary of the former estate. The landscape has been modified from any original designs with the modern farms of Merkland and Fairy Knowe utilising the landscape for agricultural purposes, and the northern edges being utilised for mining, a sewage works and a cemetery. The main elements of the designed landscape are now constrained to Kirkmichael House and the surrounding gardens and woodland, with key views probably towards the house from the open areas to the west, as well as from the house looking south and west. The views to the south are dominated by the surrounding agricultural landscape with peripheral views of the upland areas containing Carrick Forest. The blade tips and hubs of the Proposed Development would be visible in distant and peripheral views to the south, with localised vegetation likely to significantly impact on these views from a number of areas within the designed landscape (see **Figure 10.13 Viewpoint 32: Kirkmichael House**).
122. The magnitude of impact has been assessed as Negligible Adverse on an asset of Medium value, with very minor changes to setting with the introduction of blade tips and hubs within distant and peripheral views to the south. These views may be impacted upon by localised vegetation and the changes would not impact on the ability to understand and appreciate the remains of the designed landscape. As such the significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

Dalquharran (Castle) (WoSAS Pin 53485) (HA69)

123. The designed landscape is located to the north of Dailly with the meandering Water of Girvan forming the south eastern boundary of the estate. The southern half of the estate is a parkland and agricultural setting with the area to the north of the road and railway line mainly used for commercial forestry. Elements of the operational Hadyard Hill Windfarm are visible from within the designed landscape. Key views within the estate relate to reciprocal views between Dalquharran Castle (new) and Dalquharran Castle (old), as well as views towards the new castle from various areas within the landscape, and views to the east from the castle overlooking the man-made ox bow lake of the Water of Girvan. The views to the south east are dominated by the surrounding agricultural landscape and distant views of the upland areas of Craiginmoddie and Doughty Hill. The blade tips and hubs of the Proposed Development would be visible from within the designed landscape with greater visibility in the fields between the unnamed local road and the railway line (see **Figure 10.14 Viewpoint 33: Dalquharran Castle**). Views from north of the railway line would be screened by the commercial forestry plantation in this area, and views from the main elements of the designed landscape are reduced by intervening topography, and would be further impacted upon by localised vegetation within the estate.
124. The magnitude of impact has been assessed as Negligible Adverse on an asset of High value, with very minor changes to setting with the introduction of blade tips and hubs within distant and peripheral views to the south east. These views may be impacted upon by localised vegetation and the changes would not impact on the ability to understand and appreciate the remains of the designed landscape. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Balcletchie (WoSAS Pin 53517) (HA107)

125. The designed landscape is located to the north west of the village of Barr in a predominantly upland landscape with Auchensoul Hill to the east and Benan Hill to the south. The area now contains large elements of the operational Hadyard Hill Windfarm. Views to the east and north east are dominated by operational windfarm infrastructure and the only part of the designed landscape to have visibility of the Proposed Development is the far northern edge, and any visibility is likely to be impeded by the localised wind turbines.
126. The magnitude of impact has been assessed as No Change on an asset of Low value, with no changes to setting with the introduction of blade tips from a single wind turbine in distant views to the north east. As such the significance of effect has been assessed as **Neutral** (i.e. not significant in EIA terms).

10.6.3.5 Nationally and Regionally Significant Assets

Baing Loch Chambered Cairn (WoSAS Pin 7195) (HA71)

127. The cairn is located on a small promontory overlooking the Chapel Burn and at the edge of the Baing Loch. The summits of Meikle Hill, Wee Hill of Baing, Big Hill of Baing, Trostan Hill, and Dersalloch Hill surround the cairn in all directions. The operational Dersalloch Windfarm is visible in immediate views to the north. Key views are probably to the south west along the Chapel Burn and beyond. Current views to the south west are dominated by the localised topography and the felled forestry plantations on the slopes of the Big Hill of Baing, with distant views incorporating the commercial forestry plantations of Carrick Forest. The blade tips and hubs of the Proposed Development would be visible within the distant views to the south west beyond the slopes of Big Hill of Baing (see **Figure 10.8 Viewpoint 27: Baing Loch Chambered Cairn**).

128. The magnitude of impact has been assessed as Minor Adverse on an asset of High value, with slight changes to setting with the introduction of blade tips and hubs in distant views from the cairn. These changes are unlikely to impact on the ability to understand and appreciate the cairn and its association with the Chapel Burn. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Pinbreck Hill Cairn (WoSAS Pin 11676) (HA117)

129. The cairn is located at the summit of Pinbreck Hill, with open and extensive views in all directions. The operational Dersalloch and Hadyard Hill windfarms are visible to the north east and north west respectively with commercial forestry plantations in a number of directions. Key views are probably towards the Stinchar Valley to the north west, with other potentially contemporary cairns in this area as well as the Daljedburgh huts that may be a contemporary settlement. Open views are also available to the south down the Water of Minnoch Valley. Current views to the north and north east are dominated by the hills and upland areas of Carrick Forest and incorporate the commercial forestry plantations of Carrick Forest and distant views of the operational Dersalloch Windfarm. The blade tips and hubs of the Proposed Development would be visible in distant views to the north east in the context of commercial forestry with Dersalloch Windfarm in the background (see **Figure 10.9 Viewpoint 28: Pinbreck Hill Cairn**).

130. The magnitude of impact has been assessed as Negligible Adverse on an asset of High value with very minor changes to setting with the introduction of blade tips and hubs in views to the north and north east. These changes are unlikely to impact on the ability to understand and appreciate the cairn. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Mote of the Doonans Dun (WoSAS Pin 6139) (HA68)

131. The possible Dun is located in an upland landscape on the north east edge of the Doonan's Hill summit with steep sloping ground to the west and north west. The narrow valley of the Baing Burn is located to the east with the hills of Knockscawin, Trostan Hill, and Craig Hill to the north east, east, and south respectively. Current views include the infrastructure related to the operational Dersalloch Windfarm to the north east. Key views from the Dun are probably related to reciprocal views with Doonan's Hill Fort to the immediate south west, and views into and along the valley to the south east. Immediate views to the south and south west are dominated by Doonan's Hill with distant views incorporating the commercial forestry plantation of Carrick Forest and the hills beyond. The blade tips and hubs of the Proposed Development would be visible in this direction and would introduce infrastructure within the viewshed over Doonan's Hill Fort (see **Figure 10.10 Viewpoint 29: Mote of Doonan's Dun**).

132. The magnitude of impact has been assessed as Minor Adverse on an asset of Medium value, with slight changes to setting with the introduction of blade tips and hubs in distant views over the top of Doonan's Hill Fort. Intervening and localised topography would likely impact on these views. These changes are unlikely to impact on the ability to understand and appreciate the dun and its close association with the adjacent fort. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Kirkmichael House (LB13654) (HA30)

133. The house is located to the south west of Kirkmichael village, set within a designed landscape consisting of woodland, parkland, agricultural fields and a pond. The house is on higher ground within the gardens with mature trees scattered throughout the gardens screening and filtering views in most directions. Open and likely key views are available through the trees to the pond to the south, and to the west over the main lawn area. The immediate views to the south incorporate the mature trees, gardens and pond with more distant views including the surrounding agricultural landscape with peripheral views of the upland areas containing Carrick Forest. The blade tips and hubs of the Proposed Development would be visible in distant and peripheral views to the south, with localised vegetation likely to significantly impact on these views.

134. The magnitude of impact has been assessed as Negligible Adverse on an asset of High value, with very minor changes to setting with the introduction of blade tips and hubs within distant and peripheral views to the south. These views may be impacted upon by localised vegetation and the changes would not impact on the ability to understand and appreciate the house and its setting within the designed landscape. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

Auchenroy Hill Cairn (WoSAS Pin 7112) (HA50)

135. The cairn is located on the summit of Auchenroy Hill with steep sided slopes to the north east through to the south west, overlooking the River Doon Valley to the north and east. The infrastructure of the operational Dersalloch Windfarm is visible to the west. Key views are likely to relate to views towards the river valley and the town of Dalmellington to the east as well as reciprocal views with Wee Cairn Hill Cairn (WoSAS Pin 7162) to the south east. The current views to the south west include the periphery of the operational Dersalloch Windfarm alongside the distant views of Carrick Forest and the commercial forestry plantations. The blade tips and hubs of the Proposed Development would be visible within these views and add to the array of wind turbines in the viewshed from west through to south west (see **Figure 10.15 Viewpoint 34: Craigengillan GDL/Auchenroy Hill Cairn**).

136. The magnitude of impact has been assessed as Negligible Adverse on an asset of High value, with very minor changes to setting with the introduction of blade tips and hubs within distant and peripheral views to the south west. These changes would not impact on the ability to understand and appreciate the cairn and its setting over the river valley. As such the significance of effect has been assessed as **Slight Adverse** (i.e. not significant in EIA terms).

10.7 Mitigation

10.7.1 Construction

137. It is anticipated that no archaeological monitoring of groundworks would be required during the construction phase of the Proposed Development. However, the need for and scope of any archaeological monitoring of groundworks would be determined by WoSAS.

138. To mitigate the identified physical impacts on known cultural heritage assets described in **Section 10.6.2**, a programme of archaeological works would be implemented in consultation with WoSAS who advise South Ayrshire Council on heritage matters. 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 wind turbine base, access track, borrow pit, crane hardstanding, or other infrastructure related to the Proposed Development would be demarcated prior to the commencement of construction to ensure visibility of the heritage asset location to all members of the construction crew.</p> <p>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 10.6 Archaeology and Cultural Heritage Gazetteer.</p>

ID	Description
	<p>The heritage assets to be demarcated include:</p> <ul style="list-style-type: none"> • Linfairn to Burnside Footpath (HA95); • Stob Hill Sheep Ree (HA99); • Linfern Loch Wall (2) (HA100); • Stob Hill Walls (HA102); and • Stinchar Ford Wall (HA104).
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 assets to be recorded prior to construction include:</p> <ul style="list-style-type: none"> • Linfern Loch Wall (1) (HA97); • Linfern Loch Wall (2) (HA100); and • Stob Hill Walls (HA102).
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

10.7.1.1 Enhancements

139. During the assessment, it was noted that Knockinculloch Enclosures (SM3357) (**HA89**) was identified as;
“A monument is of national importance...of unknown but presumed medieval or post-medieval date, which has the potential to provide information about agricultural practice and associated economy.”
140. The Applicant would seek to engage discussion with HES and the potential for enhancement of the archaeological record through the implementation and recovery of a peat core and C14 dating of secure deposits associated with the Scheduled Monument. This would be pending the approval of any Scheduled Monument Consent requirements and pre-application discussions associated with areas of potential. It is hoped that if successful, the dating evidence would add to and enhance our current knowledge of the monument, and provide updates to the Historic Environment Record confirming a date of use and/or construction of the monument.
141. As part of the Proposed Development, there would be a number of recreational enhancements which would be implemented which include:
- provision of way markers or signposts along the existing core path SA47 located within the Site Boundary;
 - improvement of the condition of sections of the existing core path SA47 located within the Site Boundary;
 - provision of bins and seating areas within the Site Boundary (details to be agreed with landowner); and
 - provision of information boards along the Linfairn to Burnside Footpath (**HA95**) path within the Site Boundary to inform readers of the cultural heritage along the route.

10.7.2 Operational

142. 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.
143. The potential exists to explore options available for archaeological enhancement of the HER for the region, in consultation with HES and WoSAS. Through working closely with HES and WoSAS we would seek to benefit the HER, with any results able to be drawn upon and fed into the Regional Research Framework and contributing to Scotland's Archaeology Strategy. It is hoped that information recovered during the mitigation, can help set future research agendas and advance our knowledge of the Historic Environment in the region.

10.8 Residual Effects

10.8.1 Construction

144. 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 Operational Effect	
	Magnitude	Significance		Magnitude	Significance
During Construction					
Potential direct impact on Linfairn to Burnside Footpath (HA95)	Minor Adverse	Slight Adverse	Site demarcation and avoidance	Minor Adverse	Neutral
Direct impact on Linfern Loch Wall (1) (HA97)	Major Adverse	Slight Adverse	Archaeological Recording	Moderate Adverse	Slight Adverse
Direct impact on Stob Hill Sheep Ree (HA99)	Major Adverse	Slight Adverse	Site demarcation and avoidance	Minor Adverse	Neutral
Direct impact on Linfern Loch Wall (2) (HA100)	Minor Adverse	Neutral	Site demarcation and avoidance, and archaeological recording	Negligible Adverse	Neutral
Direct impact on Stob Hill Walls (HA102)	Minor Adverse	Neutral	Site demarcation and avoidance, and archaeological recording	Negligible Adverse	Neutral
Potential direct impact on Stinchar Ford Wall (HA104)	Minor Adverse	Neutral	Site demarcation and avoidance	Negligible Adverse	Neutral

Table 10.8 Residual Effects

10.8.2 Operation

145. 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. After mitigation related to direct impacts from construction, of the 120 heritage assets within the baseline, 83 were assessed as having a potential **Neutral** significance of effect, 36 were assessed as having a potential **Slight Adverse** significance of effect (i.e. not significant in EIA terms). A single heritage asset, Knockinculloch Enclosures (**SM3357**) (**HA89**) was assessed as having a potential **Moderate Adverse** significance of effect (i.e. significant in EIA terms).

10.9 Cumulative Assessment

146. It is necessary to consider whether the effects of other schemes in conjunction with the Proposed Development would result in an additional cumulative change upon the settings of heritage assets, beyond the levels predicted for the Proposed Development alone.

147. The cumulative assessment would have regard to the guidance on cumulative effects upon heritage assets as set out in Environmental Impact Assessment Handbook V5 (SNH & HES 2018) and would utilise the criteria for assessing setting impacts as set out above. The assessment of cumulative effects would consider whether there would be an increased impact, either additive or synergistic, upon the setting of heritage assets as a result of adding the Proposed Development to a baseline, which may include operational, under construction, consented or proposed developments within the planning system.

148. In determining the degree to which a cumulative effect may occur as a result of the addition of the Proposed Development into the cumulative baseline a number of factors are taken into consideration including:

- the distance between windfarms;
- the interrelationship between their zones of theoretical visibility;
- the overall character of the asset and its sensitivity to windfarms;
- the siting, scale and design of the windfarms themselves;
- the way in which the asset is experienced;
- the placing of the cumulative windfarm(s) in relation to both the individual proposal being assessed and the heritage asset under consideration; and
- the contribution of the cumulative baseline schemes to the significance of the effect, excluding the individual proposal.

149. This assessment is based upon a list of operational or consented developments along with developments where planning permission has been applied for. The cumulative sites are consistent with those assessed as part of **Chapter 5: Landscape and Visual** and have been agreed with South Ayrshire Council and SNH as part of the LVIA. Given the emphasis SNH place on significant effects, and the requirements of the EIA Regulations, cumulative effects have only been considered in detail for those assets where the effects upon the setting from the Proposed Development, alone, have been judged to be an effect of slight-moderate level or greater. Where effects on the setting of heritage assets would be of less than slight-moderate level, cumulative effects are unlikely to reach the threshold of significance as defined in **Table 10.4**.

150. There is a level of uncertainty in predicting potential changes as a result of application stage windfarm developments as these may or may not be built. This includes developments at the application stage including those at appeal. There are currently six application windfarms within the Study Area. Craiginmoddie Windfarm is the closest application stage windfarm development located 1.8km west of the Site, with Clauchrie Windfarm located 8.6km south west of the Site. The other application stage windfarms are all beyond 15km from the Proposed Development. **Figure 5.12 Cumulative ZTV – All Application Sites** illustrates the combined ZTV of the Proposed Development in addition to all application windfarms within the Study Area.

151. Scoping stage windfarm developments are displayed on **Figure 5.8 Cumulative Sites Location Plan 45km Search Area** for reference but generally have not been considered further due to design uncertainty at the pre-application stage and the possibility that only some or none of these pre applications would progress onto full applications. However, given the close proximity of Knockcronal Windfarm, which sits less than 1km to the north of

the nearest proposed wind turbine, this is considered in greater detail than other scoping sites. This scheme is being proposed by Statkraft and has a similar programme to the Proposed Development. Information has therefore been shared to enable appropriate assessment. Beyond this scheme, the remaining scoping sites are beyond 10km and not considered further.

152. Heritage assets are displayed in **Figure 10.3 Cumulative Schemes** alongside the operational and proposed windfarms within 20km of the Proposed Development wind turbine locations. The detailed results of the cumulative assessments are presented in **Appendix 10.5 Assessment of Cumulative Effects**, with the results summarised in **Table 10.9**.

153.

10.9.1 Construction

154. The heritage assets affected by the construction of the Proposed Development do not have any common receptors with heritage 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

155. 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 Dersalloch, North Threave, Dowhill Farm, Assel Valley, Hadyard Hill, Mark Hill, and Windy Standard Extension windfarms have been considered as part of the assessments provided in **Section 10.6.3**.

156. The other windfarms in the area that fall within 10km of heritage assets within the baseline include the consented windfarms of Kirk Hill, Tralorg, Torrs Hill, Overhill, Enoch Hill, South Kyle, and Benbrack, as well as the windfarms subject of a valid planning application comprising Windy Standard 3, North Kyle, Clauchrie, and Craiginmoddie. The proposed Knockcronal Windfarm has also been considered within the cumulative assessment as a potential application currently at scoping stage.

157. The ES's for the consented windfarms are no longer easily accessible online, so any assessment of effects from these windfarms has been assumed to be not significant in EIA terms (i.e. Slight Adverse or Neutral) and high level assessments have been made about their potential visibility. The assessment of their impacts on individual assets does not supersede the more detailed assessments conducted and presented within the individual windfarm environmental impact assessment reports.

158. All of the current application windfarms environmental impact assessments were available, and where they have noted the assets listed within **Table 10.9**, the significance of effect from these assessments has been used to inform the cumulative magnitude of impact and subsequent significance of effect. As it was agreed through consultation with HES that the Craiginmoddie Windfarm assessment could utilise a smaller study area of 5km for all nationally significant heritage assets, any such assets noted within **Table 10.9** that are located between 5km and 10km from the Craiginmoddie Windfarm wind turbine locations have been assessed using the methodology stated above. These assets are denoted with an asterisk within **Appendix 10.5 Assessment of Cumulative Effects** for ease of identification.

HA No.	Heritage Asset Name and Designation	Proposed Development Significance of Effect		Cumulative Significance of Effect	
		Magnitude	Significance	Magnitude	Significance
30	Kirkmichael House – Category B Listed Building	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
39	Kildoon Fort – Scheduled Monument	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
40	Sir Charles Fergusson's Monument, Kildoon – Category B Listed Building	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse

HA No.	Heritage Asset Name and Designation	Proposed Development Significance of Effect		Cumulative Significance of Effect	
		Magnitude	Significance	Magnitude	Significance
43	Blairquhan – GDL	Minor Adverse	Slight Adverse	Minor Adverse	Slight Adverse
46	Blairquhan House	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
50	Auchenroy Hill Cairn – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
60	Wee Cairn Hill Cairn – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
61	Craigengillan – GDL	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
62	Colonel Hunter Blair's Monument – Category B Listed Building	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
63	Munteoch settlement and field systems – Scheduled Monument	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
65	Quarrel Hill Farmstead – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
67	Kilkerran – GDL	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
68	Mote of the Doonan's Dun – Undesignated Asset of Regional Significance	Minor Adverse	Slight Adverse	Minor Adverse	Slight Adverse
69	Dalquharran (Castle) – Ayrshire Designed Landscape	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
70	Doonan's Hill Fort – Undesignated Asset of Regional Significance	Minor Adverse	Slight Adverse	Minor Adverse	Slight Adverse
71	Baing Loch Chambered Cairn – Undesignated Asset of National Significance	Minor Adverse	Slight Adverse	Minor Adverse	Slight Adverse
74	Dalquharran Castle – Category A Listed Building	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
75	Dalquharran Castle (Old Castle) – Scheduled Monument	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
76	Dalquharran Colliery Cropmarks – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse

HA No.	Heritage Asset Name and Designation	Proposed Development Significance of Effect		Cumulative Significance of Effect	
		Magnitude	Significance	Magnitude	Significance
84	Knockdon Enclosure – Scheduled Monument	Minor Adverse	Slight Adverse	Minor Adverse	Slight Adverse
85	Maxwellston Enclosure – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
86	Knockdon Cairn – Undesignated Asset of Regional Significance	Minor Adverse	Slight Adverse	Minor Adverse	Slight Adverse
87	Bargany – GDL	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
88	Knockoner Burn Farmstead – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
89	Knockinculloch Enclosures – Scheduled Monument	Moderate Adverse	Moderate Adverse	Moderate Adverse	Moderate Adverse
90	The Pilot/Blair House Platform – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
94	Maxwellston Hill Fort – Scheduled Monument	Minor Adverse	Slight Adverse	Minor Adverse	Slight Adverse
105	Daljedburgh Hill Huts – Undesignated Asset of National Significance	Minor Adverse	Slight Adverse	Minor Adverse	Slight Adverse
108	Dalquhairn Cairn – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
109	Knockeen Cairn – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
110	Pinvalley Dun/Cairn – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
111	Glengennet Farmstead and Kiln – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
112	Bencallen Cairn – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
113	Auchensoul Hill Cairn – Undesignated Asset of Regional Significance	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse
115	Barr – Conservation Area	Negligible Adverse	Slight Adverse	Negligible Adverse	Slight Adverse

HA No.	Heritage Asset Name and Designation	Proposed Development Significance of Effect		Cumulative Significance of Effect	
		Magnitude	Significance	Magnitude	Significance
117	Pinbreck Hill Cairn – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse
120	Cairn Hill Cairn – Undesignated Asset of National Significance	Negligible Adverse	Slight Adverse	Minor Adverse	Slight Adverse

Table 10.9 Cumulative Effects

159. From the assessment of the cumulative impacts, the addition of the Proposed Development alongside already consented windfarms, would not result in any cumulative increase (or decrease) in the overall significance of effect for each of the heritage assets assessed. However, the introduction of the Proposed Development alongside Clauchrie Windfarm and Craiginmoddie Windfarm would have the potential for a cumulative increase in the overall significance of effect on three heritage assets within the baseline. The assessment of these assets is presented below.

The Pilot/Blair House Platform (WoSAS Pin 12754) (HA90)

160. The cumulative impact on the Pilot/Blair House Platform has taken into account the current baseline scenario, and includes the addition of the Kirkhill Windfarm (consented), the Craiginmoddie Windfarm (application) and the Proposed Development. Impacts from the Kirk Hill Windfarm and the Proposed Development have been assessed as Negligible Adverse as they would have no impact on key views from the house. Impacts from Craiginmoddie Windfarm have been assessed as Moderate Adverse due to the positioning of the windfarm infrastructure on the slopes to the immediate south. The introduction of wind turbines in close proximity would result in changes to the setting of the house.

161. Consequently, the cumulative impact of the addition of the Proposed Development to a baseline along with consented and application developments would result in slight changes to the setting of the monument, with a small extension to the array of visible turbines at distance to the south-east. These slight visual changes are unlikely to impact on our ability to appreciate and understand the monument with key views along the Dobbingsstone Burn, back-clothed in a landscape dominated by commercial forestry plantation. Therefore the cumulative significance of effect would be **Slight Adverse** (i.e. not significant in EIA terms).

Cairn Hill Cairn (WoSAS Pin 11677) (HA120)

162. The cumulative impact on Cairn Hill Cairn has taken into account the current baseline scenario, and includes the addition of the Clauchrie Windfarm (application), the Craiginmoddie Windfarm (application), and the Proposed Development. Impacts from the Craiginmoddie Windfarm and the Proposed Development have been assessed as Negligible Adverse as they would only appear in distant and peripheral views and would not impact on key views from the cairn. Impacts from the Clauchrie Windfarm have been assessed as Moderate Adverse. The introduction of wind turbines in close proximity would result in changes to the setting of the cairn.

163. Consequently, the cumulative impact of the addition of the Proposed Development to a baseline along with consented and application developments would result in slight changes to the setting of the monument, with a small extension to the array of visible turbines to the north-east at considerable distance. These slight visual changes are unlikely to impact on our ability to appreciate and understand the monument with key views potentially related to the west and north-west towards coastal areas and the Isle of Arran and Mull of Kintyre. The Proposed Development will be back-clothed in a landscape dominated by commercial forestry plantation. Therefore the cumulative significance of effect would be **Slight Adverse** (i.e. not significant in EIA terms).

10.9.3 Cumulative Summary

164. The assessment of cumulative effects from other windfarms that are consented, are subject to planning applications, or are in the process of developing a planning application, has shown that the introduction of the Proposed Development alongside cumulative schemes would result in an increase in magnitude of impact from Negligible Adverse to Minor Adverse for 12 heritage assets:

- Auchenroy Hill Cairn (**HA50**);
- Wee Cairn Hill Cairn (**HA60**);
- Craigengillan GDL (**HA61**);
- Dalquharran Castle (**HA74**);
- Bargany GDL (**HA87**);
- Pilot/Blair House Platform (**HA90**);
- Dalquhairn Cairn (**HA108**);
- Knockeen Cairn (**HA109**);
- Pinvalley Dun/Cairn (**HA110**);
- Bencallen Cairn (**HA112**);
- Pinbreck Hill Cairn (**HA117**); and
- Cairn Hill Cairn (**HA120**).

165. The cumulative increase in magnitude of impact in all cases would not result in an increase in significance of effect, returning a **Slight Adverse** impact (i.e. not significant in EIA terms).

10.10 Summary

166. The Archaeology and Cultural Heritage assessment conducted in relation to the Proposed Development was based on a desk-based assessment, field surveys, and consultations with HES and WoSAS.

167. A total of 120 heritage assets have been included in the baseline related to the assessment of the Proposed Development. Seven of these were identified within the Site Boundary and have the potential to be impacted upon by the Proposed Development. They are all related to Post-Medieval agricultural practices from the 18th and 19th century and are deemed to be of Low or Negligible 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, previous commercial forestry activity, and lack of other archaeological remains in close proximity other than upstanding Post-Medieval agricultural heritage assets.

168. 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 all of these heritage assets, ranging from Minor to Major magnitude of impacts, but after mitigation measures of demarcation or recording, the residual significance of effect on these heritage assets would be mostly **Neutral**, with one **Slight Adverse** significance of effect on a section of drystone wall at Linfern Loch (**HA97**) that would be removed in its entirety.

169. Within the Study Area, there are a further 113 heritage assets within the baseline. Of these heritage assets, the Knockinculloch Enclosures (**SM3357**) (**HA89**) is anticipated to receive a significant effect of **Moderate Adverse** in relation to impacts on its setting. The remaining heritage assets have no significance of effects deemed to be greater than **Slight Adverse**, with the largest impacts related to heritage assets in close proximity to the Site, or those that may be more distant with views of a greater number of wind turbines. However, the majority of the magnitude of impacts only introduce slight changes to the setting of these heritage assets, with the majority of key views unaffected.

170. The assessment of cumulative effects from windfarms that are consented, subject to planning applications, or are in the process of developing a planning application has shown that the introduction of the Proposed Development alongside these other windfarm developments would result in an increase in magnitude of impact on 12 heritage assets. The cumulative increase in magnitude of impact in all cases would not result in an increase in significance of effect however, returning a **Slight Adverse** effect (i.e. not significant in EIA terms).

10.11 References

- ALGAO: Scotland (2013). Historic Building Recording Guidance for Curators, Consultants and Contractors. Available online at: https://www.algao.org.uk/sites/default/files/documents/ALGAO_Scotland_Buildings_Guidance_2013.pdf
- Baillie, A (1774). A map of Ayr-shire. Reduced from captain Armstrong's six sheet map / engraved by Alexander Baillie. [online] <https://maps.nls.uk/counties/rec/7158> [Accessed 19/10/2020]
- Blaeu, J (1654). Carricta meridionalis, The South part of Carrick / auct. Timoth. Pont [online] <https://maps.nls.uk/atlas/blaeu/browse/83> [Accessed 19/10/2020]
- Chartered Institute for Archaeologists (2020a). Standards and Guidance for Historic Environment Desk Based Assessment.
- Chartered Institute for Archaeologists (2020b). Standards and Guidance for commissioning work on, or providing consultancy advice on, archaeology and the historic environment.
- Chartered Institute for Archaeologists (2021). By-Laws: Code of Conduct.
- Highways England, Transport Scotland, Welsh Government, & Department for Infrastructure (2019). Design Manual for Roads and Bridges. Sustainability & Environment Appraisal. LA104 Environmental assessment and monitoring. Revision 1
- Historic Environment Scotland (2019). Historic Environment Policy for Scotland [online] <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=1bcfa7b1-28fb-4d4b-b1e6-aa2500f942e7> [Accessed 24/06/2020].
- Historic Environment Scotland (2020a). Designation Policy and Selection Guidance [online] <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=8d8bbaeb-ce5a-46c1-a558-aa2500ff7d3b> [Accessed 24/06/2020].
- Historic Environment Scotland (2020b). Managing Change in the Historic Environment Setting – Historic Environment Scotland's guidance note series. Available online at: <https://www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes/>
- International Council on Monuments and Sites (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties.
- Ordnance Survey (1856). Ayrshire, Sheet LVII [online] <https://maps.nls.uk/view/74425844> [Accessed 19/10/2020]
- Scottish Government (2011). Planning Advice Note (PAN) 2/2011: Planning and Archaeology.
- Scottish Government (2014). Scotland's Third National Planning Framework.
- Scottish Government (2014). Scottish Planning Policy.
- Scottish Natural Heritage (2017). Siting and Designing Wind Farms in the Landscape.
- Scottish Natural Heritage & Historic Environment Scotland (2018). Environmental Impact Assessment Handbook.
- South Ayrshire Council (2014). South Ayrshire Local Development Plan [online] <https://www.south-ayrshire.gov.uk/planning/local-development-plans/local-development-plan.aspx> [Accessed 01/10/2020].
- UK Government (1979). Ancient Monuments and Archaeological Areas Act.
- UK Government (1997). Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997.
- West of Scotland Archaeology Service (2009). Procedural Guidance for Archaeology and Development [online] https://www.wosas.net/web_pdfs/Procedural%20Guidance%202.pdf [Accessed 12/11/2020].

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