

9 Cultural Heritage

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9 Cultural Heritage

9.1 Executive Summary

- 9.1.1 This chapter identifies the archaeological and cultural heritage value of the site and surrounding study area and assesses the direct and indirect likely significant effects on archaeological features and heritage assets resulting from the construction, operation and decommissioning of the Proposed Development. This chapter also identifies measures that should be taken to mitigate predicted likely significant adverse effects and reports on the residual impact of the Proposed Development on heritage assets.
- 9.1.2 The Applicant (ERG) has extensive experience of working with roman ruins on developments in Italy.
- 9.1.3 This assessment has identified 31 known heritage assets within the site boundary. These assets range between the Roman and the modern period. A **minor** and not significant direct effect has been identified on any surviving remains associated with the possible route of the Roman road between Laxlie Hill and Blackhouse Manor (Site 160). Additionally, the identification of archaeological remains of prehistoric to post-medieval date in and around the site indicate the potential for hitherto unknown sub-surface archaeological deposits. Where possible, the Proposed Development has been designed to avoid direct impacts upon known heritage features within the site.
- 9.1.4 National planning policies and planning guidance, as well as local planning policies, require that account is taken of potential effects upon the historic environment by proposed developments and that where possible such effects are avoided. Where avoidance is not possible, these policies and guidance documents require that effects on any significant remains be minimised or offset.
- 9.1.5 Given the known remains and potential for archaeological remains to survive within the site, a programme of archaeological works to investigate, record and mitigate against the possibility of uncovering hitherto unknown remains will be undertaken. Mitigation works will include; fencing of all known heritage assets within 50 m of working areas to prevent inadvertent damage to them; an archaeological watching brief undertaken on a representative proportion of ground-breaking works. A phase of further archaeological evaluation (non-intrusive and/or intrusive) based on the projected route of the Laxlie Hill and Blackhouse Manor (Site 160) Roman road will also be undertaken. Details of mitigation will be agreed with WoSAS on behalf of North Ayrshire Council through a Written Scheme of Investigation.
- 9.1.6 Potential indirect effects on the settings of 37 designated heritage assets have been considered in detail as part of this assessment. A potential **moderate** and significant operational effect on the setting of Outerwards, Roman fortlet (Site 10) has been identified. The Proposed Development layout has been designed to minimise impacts upon the setting of the fortlet through the deletion and location of turbines and imposition of a 1 km buffer to ensure that the turbines do not dominate the setting of the fortlet. The design of the Proposed Development means that views towards the Firth of Clyde would still be permeable, although altered, and the Proposed Development will only have an impact on one sightline from the fortlet. It would still be possible to understand the monument as a defensive site set in a strategic location with extensive views of the landscape, particularly key areas of transition. The key relationship between the fortlet and land to the north, east and south, as well as the key relationship of the fortlet with the Roman road which is aligned through it would also be unaffected. The fort survives as a subtle landscape feature and is not visible at any distance and thus there would be no effect on views towards the fort from across the landscape. Thus, the overall integrity of the setting of the monument would not be adversely affected.
- 9.1.7 Interpretation and further survey works of a Roman road possibly located within the site and the wider Roman landscape will be undertaken as compensatory mitigation, as part of a Heritage Interpretation Plan (HIP), to partially offset potential impacts of the Proposed Development on the setting of heritage assets in its vicinity. The HIP would include a programme of archaeological evaluation, community survey and excavation works within the proposed development site focusing

specifically on the Roman road network hypothesised by Newall (1976) to pass through the proposed development site but about which very little is currently known. Subsequent interpretation, undertaken as part of the HIP, would enhance our understanding of the historic landscape setting of Outerwards Roman fortlet. Improved access and interpretation both on site and remotely (i.e. interpretation hubs, guided school visits, education packs, Historic Environment Record enhancement) would also enhance visitors' experience of heritage in the area and of the countryside in general.

- 9.1.8 Survey and excavation works would focus on the landscape setting of the fortlet rather than the fortlet itself and thus no proposals would be put forward that would require Scheduled Monument Consent. The setting effect on Outerwards, Roman fortlet (Site 10) would remain significant.
- 9.1.9 All operational effects upon the settings of heritage assets would be reversed with the removal of the turbines following decommissioning, leading to a neutral residual effect
- 9.1.10 The possibility of cumulative effects has been assessed. No significant cumulative effects were identified.

9.2 Introduction

- 9.2.1 This chapter considers the likely significant effects of the proposed Rigg Hill Wind Farm (hereafter referred to as the 'Proposed Development') on Archaeology and Cultural Heritage. The Proposed Development is for a wind farm of 10 turbines with a maximum height of up to 149.9 m and is described in detail in EIA Report Chapter 3.
- 9.2.2 This assessment identifies the archaeological and cultural heritage value of the site and assesses the potential for direct effects on archaeology and heritage assets resulting from the construction operation and decommissioning of the Proposed Development. This assessment also assesses the indirect effects upon the setting of key heritage assets within the site and the wider landscape during the operational phase. This chapter also identifies measures that will be taken to mitigate or offset predicted significant adverse effects. An assessment of potential cumulative effects is also made.
- 9.2.3 This assessment distinguishes between the term 'impact' and 'effect'. An impact is defined as a physical change to a heritage receptor or its setting, whereas an effect refers to the significance of this impact upon the receptor. The first stage of the assessment involves establishing the value and importance of the heritage receptor and assessing the sensitivity of the asset to change (impact). Using the design for the Proposed Development, an assessment of the magnitude of impact is made and the significance of effect is determined. The methods for determining effect significance for both direct effects and indirect effects are outlined below.
- 9.2.4 This chapter has been produced by AOC Archaeology Group, a Registered Organisation of the Chartered Institute for Archaeologists (CIfA). This chapter conforms to the standards of professional conduct outlined in the Chartered Institute for Archaeologists' Standards and Guidance for Historic Environment Desk Based Assessments (CIfA 2017); Commissioning Work or Providing Consultancy Advice on the Historic Environment (CIfA 2014) and follows IEMA's EIA Guidelines (as updated) (IEMA, 2016).
- 9.2.5 This chapter has been produced by Yvonne Robertson (MA (Hons), MA, ACIfA) and Lynne Roy (BA (Hons), MSc, MCIfA, FSA Scot) of AOC Archaeology Group. Yvonne is an experienced archaeological consultant with over six years of experience in the commercial archaeological sector. Lynne has over 15 years of knowledge and experience in the historic environment, with a specialism in preparing Environmental Impact Assessments.

9.3 Legislation, Policy and Guidelines

Legislation

- 9.3.1 Full details of the relevant planning policy are provided in Chapter 5. The most relevant planning policy relevant to this chapter are:
 - The Ancient Monuments and Archaeological Areas Act 1979 (as amended);

- The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (as amended);
- The Town and Country Planning (Scotland) Act 1997 (as amended);
- Historic Environment (Amendment) (Scotland) Act 2011;
- Historic Environment (Scotland) Act 2014;
- Town and Country Planning (Scotland) Regulations 2017 (as amended).

Planning Policy

- 9.3.2 The implications of this legislation with regard to relevant planning policy and guidance are contained within:
- Historic Environment Policy for Scotland (HEPS) (Historic Environment Scotland 2019a);
 - Scottish Planning Policy (SPP) (Scottish Government 2014); and
 - Local Development Plan (North Ayrshire Council 2019).
- 9.3.3 The implications of these Acts with regard to local government planning policy are described within SPP (Scottish Government 2014), HEPS (HES 2019a) and PAN2/2011 (Scottish Government 2011) which provide specific planning policy in relation to heritage. The planning policy and guidance expresses a general presumption in favour of preserving heritage remains in situ. Their “*preservation by record*” (i.e. through excavation and recording, followed by analysis and publication, by qualified archaeologists) is a less desirable alternative.
- 9.3.4 HEPS (HES, 2019a) sets out the Scottish Government’s policy for decision making that affects the historic environment. It contains six policies for managing the historic environment, all of which favour protection, understanding and promotion of the historic environment as well as the preservation of the benefits of the historic environment for future generations. Four of the policies are relevant when considering cultural heritage through the development management process:
- *‘HEP1: Decisions affecting any part of the historic environment should be informed by an inclusive understanding of its breadth and cultural significance.*
 - *HEP2: Decisions affecting the historic environment should ensure that its understanding and enjoyment as well as its benefits are secured for present and future generations.*
 - *HEP3: Plans, programmes, policies and strategies, and the allocation of resources, should be approached in a way that protects and promotes the historic environment. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be put in place.*
 - *HEP4: Changes to specific assets and their context should be managed in a way that protects the historic environment. Opportunities for enhancement should be identified where appropriate. If detrimental impact on the historic environment is unavoidable, it should be minimised. Steps should be taken to demonstrate that alternatives have been explored, and mitigation measures should be in place’ (HES, 2019a: 9).*
- 9.3.5 North Ayrshire Council adopted their LDP in November 2019. Policies 10 to 13 are related to Listed Buildings, Historic Gardens and Designed Landscapes, Scheduled Monuments and Non-designated Archaeological Sites and Monuments respectively. Policies related to Listed Buildings, Historic Gardens and Designed Landscapes and Scheduled Monuments require developments to prioritise and enhance these assets and state that developments where there would be an adverse effect on the assets and their settings are only acceptable in exceptional circumstances. With regard to Non-designated Archaeological Sites and Monuments, in situ preservation should be sought wherever possible and where a development would *‘not preserve archaeological sites and monuments in situ will not be supported unless there is an overwhelming social, economic or environmental reason’*

(North Ayrshire Council, 2019). Appropriate excavation, recording, analysis, publication and archiving of the finds before and/or during development would be required in these instances.

Guidance

9.3.6 Consideration has been taken of the following best practice guidelines/guidance in preparing this assessment:

- Planning Advice Note 2/2011 (PAN 2) (Scottish Government 2011);
- Chartered Institute for Archaeologists (CIfA) Standards and Guidance for Historic Environment Desk Based Assessments (CIfA 2017) and Commissioning Work or Providing Consultancy Advice on the Historic Environment (CIfA 2014);
- Historic Environment Scotland's "Managing Change in the Historic Environment" guidance note series, particularly Historic Environment Scotland's Managing Change in the Historic Environment: Setting (HES 2016);
- Scottish National Heritage's published guidance for 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (SNH 2012); and
- Scottish Natural Heritage & Historic Environment Scotland Environmental Impact Assessment Handbook v5 (SNH & HES 2018).

9.3.7 HES's setting guidance defines setting as '*the way the surroundings of a historic asset or place contribute to how it is understood, appreciated, and experienced*' (HES 2016). The guidance further notes that '*planning authorities must take into account the setting of historic assets or places when drawing up development plans and guidance, when considering various types of environmental and design assessments/statements, and in determining planning applications*' (ibid). It advocates a three-stage approach to assessing potential impacts upon setting:

- Stage 1: Identify the historic asset.
- Stage 2: define and analyse the setting.
- Stage 3: evaluate the potential impact of the proposed changes.

9.4 Consultation

9.4.1 Table 9.1 summarises the responses from statutory and non-statutory consultation bodies in regard to cultural heritage and the Proposed Development.

Table 9.1 – Summary of Consultation Responses

Consultee	Summary of Response	Where and How Addressed
West of Scotland Archaeological Service (WoSAS)	Scoping Opinion – 3 rd September 2019 No designated heritage assets are identified within the site although four non-designated assets have been identified, all of which relate to the agricultural economy. Two possible Roman roads which have been identified, one of which runs through the centre of the site; however, the suggested course of these roads is likely to be somewhat conjectural and so may not reflect the course of the	The walkover survey included an assessment of any potentially visible elements of the Roman routes. The setting of Outerwards, Roman fortlet has been taken into account when designing the Proposed Development. This has included the deletion and relocation of turbines to ensure the key view down Skelmorlie Glen would be maintained. A buffer of 1km around the fortlet has been set to ensure that turbines

Consultee	Summary of Response	Where and How Addressed
	<p>road on the ground. Further work would be necessary to locate visible elements of these features to accurately identify the routes.</p> <p>The two designated heritage assets within 1km of the boundary of the site are the Roman fortlet [<i>sic</i>] at Outerwards, a Scheduled Monument, and Skelmorlie Castle, a Category B Listed Building. The impact of the development on the setting of Outerwards fortlet is of particular concern. All of the turbines are suggested to be prominently visible and their construction would have a substantial detrimental impact on the setting of the monument. This is of particular concern as the position of the fortlet suggests views down the valley of the Skelmorlie Water towards the Clyde Estuary are likely to have been a major consideration for the selection of this location. It is therefore possible WoSAS may advise the council to refuse planning consent in order to preserve the setting of the fortlet. Visualisations should therefore be provided and it is essential that photomontages showing how the setting of the fortlet would be altered are supplied. It is possible that the impact of the turbines on the setting of this site alone may be of such a magnitude as to make construction of the wind farm incompatible with current policies.</p> <p>WoSAS is in agreement with the proposal to assess the impact of the turbines on the setting of Scheduled Monuments, Category A Listed Buildings, Conservation Areas, Inventory Battlefields and Inventory Designed Landscapes out to 15 km. WoSAS is generally in agreement with the need for desk-based assessment and range of sources, though it is stressed that WoSAS should be directly</p>	<p>do not dominate the setting of the fortlet.</p> <p>The setting of Outerwards fortlet is considered in detail in sections 9.9.10 to 9.9.17. Photomontages and/or wireframes have also been produced (Figures 9.10 – 9.13).</p> <p>Walkover survey undertaken with full details discussed in sections 9.6.27 to 9.6.41.</p> <p>Historic Environment Record (HER) data obtained from WoSAS (Extract ID AC1139).</p> <p>WoSAS consulted directly throughout the project.</p> <p>Chapter now clearly states that all designated assets including Category B and C Listed Buildings within 5km are assessed, while only assets of national importance are assessed in the extended 15 km study area.</p> <p>Detailed settings assessment of non-designated heritage assets of regional or greater importance which are particularly sensitive to change have been undertaken and are presented in section 9.9.6 to 9.9.17 and Appendix 9.4.</p>

Consultee	Summary of Response	Where and How Addressed
	<p>contacted as online datasets may be out of date. WoSAS is in agreement that a detailed walkover survey is essential.</p> <p>Slight issue is taken with the statement that all designated heritage assets within 5km of the site boundary will be assessed to determine whether their settings would be affected by construction of the proposed wind farm while nationally-important assets including scheduled monuments, A listed buildings, Inventoried Gardens and Designed Landscapes and Conservation Areas, the proposed study area would be extended out to 15km. The division is seen as slightly artificial as all Scheduled Monuments will automatically be of national significance.</p> <p>Issue is also taken regarding the focus of the methodology on assessing the effect of the turbines on the setting of designated assets with the exclusion of non-designated assets. While it would not be feasible to assess visual impacts on all assets, account should be taken of the impact of the development on non-designated features whose setting may be particularly sensitive to change. Several non-designated assets within 5km are identified as potential candidates for inclusion in the schedule in the Non-Statutory Register (NSR) which should be considered of regional or greater importance. The cup and ring marked stone at Martin Glen is highlighted in particular.</p>	
<p>Historic Environment Scotland (HES)</p>	<p>Scoping Opinion – 13th September 2019</p> <p>The Proposed Development has the potential to have a significant adverse effect on the setting of the Scheduled Monument known as Outerwards, Roman fortlet. The fortlet is part of a network of Roman installations which</p>	<p>The setting of Outerwards, Roman fortlet has been taken into account when designing the Proposed Development (section 9.8). A detailed settings assessment of the fortlet has been undertaken (sections 9.9.10-9.9.17) and mitigation measures for residual</p>

Consultee	Summary of Response	Where and How Addressed
	<p>run along the River Clyde and the Firth of Clyde as the western continuation of the Roman defences associated with the Antonine Wall and were a key element of the Roman occupation of Scotland.</p> <p>The fortlet was positioned to command extensive views over the Firth of Clyde and the relationship between the fortlet and the Firth of Clyde is instrumental in understanding the function of the fortlet. Views in this direction are a key element of the monument's setting. The proposed development at Rigg Hill Wind Farm would be likely to significantly affect these views, altering their focus.</p> <p>Further information will be necessary to understand this. However, as this element of the fortlet's setting makes an important contribution to its cultural significance, the proposals have the potential to raise issues in the national interest. Such impacts may merit our objection to the proposals.</p> <p>We strongly recommend that further pre-application discussion takes place before the design is finalised, to maximise opportunities to identify mitigation, and to allow us to fully understand the effects of the proposals on the monument.</p> <p>We would recommend revising the methodology, to simply [<i>sic</i>] it, and to focus on impacts on cultural significance. This would allow for a single methodology, and a more consistent approach. It would also reduce the amount of prescriptive and exhaustive definitions, allowing more space for professional judgement.</p>	<p>adverse effects have been proposed (section 9.10).</p> <p>AOC Archaeology attended a meeting with HES at Outerwards Roman fortlet for further pre-application discussion regarding the potential significant effect of the Proposed Development on the setting of the fortlet, revised turbine locations and possible mitigation options. Wirelines of two options of turbine locations were discussed. Further to changes to the Proposed Development, another wireline was sent to HES for comment. No changes to the Proposed Development were advised as it was not seen that changes would improve the scheme design in terms of the setting of Outerwards, Roman fortlet (Site 10).</p> <p>It is acknowledged that SPP (2014) gives equal weight to direct impacts on heritage assets, and to impacts on their setting and that it does not distinguish between direct impacts and setting impacts as both are integral to cultural significance. However, the principle that a direct impact is greater than the indirect settings effects is enshrined in UK heritage legislation which requires Scheduled Monument Consent (SMC) or Listed Building Consent (LBC) for any physical impact upon a Scheduled Monument or Listed Building but does not require such consent for an impact on setting.</p> <p>Annex 1: Scheduled Monuments and Annex 2: Listed Buildings of the Designation and Selection Guidance (2019b) states that it is illegal to alter or demolish a Scheduled Monument or Listed Building, anything attached to it or anything within its curtilage without SMC or LBC, but it does not</p>

Consultee	Summary of Response	Where and How Addressed
		<p>suggest that changes to the setting of Scheduled Monument or Listed Buildings require prior permission or are illegal. In effect this indicates that direct impacts are considered to be more important. As such AOC Archaeology maintains that the methodology outlined in Tables 9.4 and 9.8 is appropriate.</p> <p>Further Tables 9.4 and 9.8 in the EIAR are not directly comparable and reflect the different factors being considered. Table 9.4 determines significance of direct impacts based on importance vs magnitude of impact whereas Table 9.8 determines relative sensitivity vs magnitude of impact. This is an important distinction as Relative sensitivity is not defined by designation whereas designation statutorily defines an asset's importance. This distinction allows for a non-designated asset with a high relative sensitivity to be properly considered. Relative sensitivity and Importance are not necessarily comparable and therefore the tables are necessarily different.</p>
Historic Environment Scotland	<p>Letter 13th January 2020</p> <p>Understand that the layout of the proposed development has been altered in light of previous advice regarding potential impacts on this monument. This includes the removal of two turbines and relocation of others to ensure that all remaining turbines are located at a distance of greater than 1km from the monument. This has to some extent reduced the level of impact on the setting of the monument that we identified in letter dated 13th September 2019.</p>	<p>The setting of Outerwards, Roman fortlet has been taken into account when designing the Proposed Development (section 9.8).</p> <p>The alterations to the Proposed Development layout have reduced the level of impact on the setting of the monument.</p> <p>No further alterations to layout or turbine height that could further meaningfully reduce the impact and therefore no further changes to the proposed turbine layout.</p>

Consultee	Summary of Response	Where and How Addressed
	<p>Agree with the assessment provided that the impact of the proposed scheme remains significant</p> <p>Note that impacts on two specific sightlines from the monument have now been avoided through the design of the layout of the scheme. These are views down Skelmorlie Glen and towards Arran. Avoiding these particular views is helpful as they contribute to our understanding of the strategic location of the fort.</p> <p>The most important contribution of these views comes from their part in a wider arc of view from south-west to north-west. This arc of view includes several other sightlines that also contribute to our understanding.</p> <p>Given the nature of the scheme, it has not been possible to avoid impacts on this wider arc of view.</p> <p>There has also been a reduction in the sense of dominance that the wind farm would have over the monument, created by the relocation of turbines further from it.</p> <p>The scale and movement of the turbines will mean that the development will distract from any sightlines that remain open, and they will become the dominant element of the views in this direction from the fortlet.</p> <p>There remains a significant impact on the setting of the monument and its cultural significance</p> <p>Acknowledge that attempts have been made to avoid and reduce impacts on cultural heritage, and that these options appear to have been exhausted. In line with the EIA mitigation hierarchy, the final option to be explored is offsetting (or compensatory) measures.</p> <p>The compensatory scheme proposed may have some beneficial impacts on</p>	<p>A detailed settings assessment of the fortlet has been undertaken (sections 9.9.10-9.9.17)</p> <p>The EIA Regulations require Decision Notices for EIA development to include a description of the mitigation measures committed to within the EIA Report. Regulation 29 sets out that mitigation measures include offsetting.</p> <p>Accordingly, offsetting requires to be taken into account in the planning decision and in terms of the EIA Regulations should not, in principle, be treated differently from other forms of mitigation such as avoidance, prevention or reduction</p> <p>The offsetting mitigation measures would comprise a Heritage Interpretation Plan (HIP) which would include a programme of archaeological evaluation, community survey and excavation works within the proposed development site. Survey and excavation works would focus on the landscape setting of the fortlet rather than the fortlet itself and thus would not require Scheduled Monument Consent</p>

Consultee	Summary of Response	Where and How Addressed
	<p>the understanding and appreciation of the monument. However, it is not possible for a scheme of this nature to reduce the significance of the overall effect.</p> <p>it is therefore likely that should a scheme come forward at this scale in this location, it will warrant our objection.</p>	

9.5 Assessment Methodology and Significance Criteria

Consultation

- 9.5.1 An EIA Scoping Opinion was issued by WoSAS on behalf of North Ayrshire Council on the 3rd September 2019 and by HES on the 13th September 2019. AOC Archaeology met with HES at Outerwards Roman fortlet on 21st October 2019 to discuss the response and the Proposed Development; initial results of the walkover were discussed, and wirelines were provided of the Proposed Development from Outerwards, Roman fortlet (Site 10), the setting of which was a primary concern for HES. Further consultation was undertaken with HES in November 2019, following changes to turbine numbers and layout and with specific reference to the potential implications on the setting of Outerwards, Roman fortlet (Site 10). Detail regarding issues raised by consultees and how these have been addressed is presented in Table 9.1 above.

Study Area

- 9.5.2 The aim of this assessment is to identify the archaeological and cultural heritage value of the site and to identify the likely significant direct and indirect effects which may result as a consequence of the Proposed Development. Four study areas were identified for this assessment, with details of the identified assets within the study areas included within the Site Gazetteer, Appendix 9.1:
- A core study area (the site) which includes all land within the site boundary which is subject to assessment for potential direct effects. This study area was subject to walkover survey which was used to identify cultural heritage assets which may be directly affected by the Proposed Development (Figure 9.1).
 - A 1 km study area for the identification of all known heritage assets and known previous archaeological interventions in order to help predict whether any similar hitherto unknown archaeological remains are likely to survive within the site and thus be impacted by the Proposed Development (Figure 9.2).
 - A 5 km study area for the assessment of potential effects on settings of all designated assets, and non-designated assets of regional or greater importance (Figure 9.3).
 - A 15 km study area for the assessment of potential effects on settings of designated heritage assets of national importance (Scheduled Monuments; Category A Listed Buildings; Inventoried Gardens and Designed Landscapes; Inventoried Battlefields and Conservation Areas) (Figure 9.4).

Desk Study

- 9.5.3 The following sources were consulted for the collation of data:
- West of Scotland Archaeology Service (WoSAS) Historic Environment Record (HER);
 - The National Record for the Historic Environment (NRHE) as held by HES;
 - Spatial data and descriptive information for designated assets held on HES Data website;
 - Ordnance Survey maps (principally First and Second Edition), and other published historic maps held in the Map Library of the National Library of Scotland;
 - Online aerial satellite imagery, google earth, bing, ESRI aerial mapping;
 - Scottish Remote Sensing Portal for LiDAR data;
 - Vertical and oblique aerial photographs held by the National Collection of Aerial Photographs (NCAP), as held by HES;
 - Published bibliographic sources, including historical descriptions of the area (Statistical Accounts, Parish Records);
 - The Scottish Palaeoecological Database; and
 - The Historic Land-use Assessment Data (HLAMap) for Scotland.

Site Visit

- 9.5.4 An archaeological walkover survey of the site was undertaken with the aim of identifying any previously unknown archaeological features. All known and accessible heritage assets were assessed in the field to establish their survival, extent, significance and relationship to other sites. Weather and any other conditions affecting the visibility during the survey were also recorded. All heritage assets encountered were recorded and photographed. The location of features noted in the field was recorded using ArcGIS Surveyor and cross-referenced with hand-held GPS and mapping to record and confirm the position of each feature and to record the route of the survey. All features were marked on plans, at a relevant scale and keyed by means of Grid References to the Ordnance Survey mapping.

Assessment of Potential Effect Significance

- 9.5.5 This assessment distinguishes between the term ‘impact’ and ‘effect’. An impact is defined as a physical change to a heritage asset or its setting, whereas an effect refers to the significance of this impact. The first stage of the assessment involves establishing the importance of the heritage asset and assessing the sensitivity of the asset to change (impact). Using the proposed design for the Proposed Development, an assessment of the impact magnitude is made and a judgement regarding the level and significance of effect is arrived at.

Direct Effect Assessment

Establishing Cultural Heritage Importance

- 9.5.6 The definition of cultural significance is readily accepted by heritage professionals both in the UK and internationally and was first fully outlined in the Burra Charter, which states in article one that ‘cultural significance’ or ‘cultural heritage value’ means aesthetic, historic, scientific, social or spiritual value for past, present or future generations (ICOMOS 2013, Article 1.2). This definition has since been adopted by heritage organisations around the world, including HES. HEPS notes that to have cultural significance an asset must have a particular “*aesthetic, historic, scientific or social value for past, present and future generations*” (2019a). Heritage assets also have value in the sense that they “*...create a sense of place, identity and physical and social wellbeing, and benefits the economy, civic participation, tourism and lifelong learning*” (Scottish Government, 2014).

- 9.5.7 For clarity, and to avoid confusion with ‘significance’ in EIA terms, the term ‘importance’ will be applied throughout this assessment though, as outlined above, it is acknowledged this is the same as cultural significance as defined in HEPS.
- 9.5.8 All heritage assets have some value; however, some heritage assets are judged to be more important than others. The level of that importance is, from a cultural resource management perspective, determined by establishing the asset’s capacity to contribute to our understanding or appreciation of the past (HES, 2019b: para 17b). In the case of many heritage assets their importance has already been established through the designation (i.e. Scheduling, Listing and Inventory) processes applied by Historic Environment Scotland.
- 9.5.9 The criteria used to rate importance of heritage assets are presented in Table 9.2 below and relate to the criteria for designations as set out in Designation Policy and Selection Guidance (HES 2019b), Scotland’s Listed Buildings (HES 2019c) and professional judgement.

Table 9.2 – Criteria for importance of heritage assets

Asset importance	Criteria
International (Very High Sensitivity)	World Heritage Sites;
National (High Sensitivity)	Scheduled Monuments (actual and potential); Category A Listed Buildings; Inventory Gardens and Designed Landscapes; Inventory Battlefields; and/or Fine, little-altered, and therefore outstanding, examples of some particular period, style or type.
Regional (Medium Sensitivity)	Category B Listed Buildings; Conservation Areas; Major examples of some period, style or type, which may have been altered; or Assets of a type which would normally be considered of national importance that have been partially damaged (such that ‘their inherent capability or potential to make a significant addition to the understanding or appreciation of the past’ has been diminished).
Local (Low Sensitivity)	Category C Listed Buildings; Representative examples of any period, style or type, as originally constructed or altered, and simple, traditional sites, which group well with other significant remains, or are part of a planned group such as an estate or an industrial complex; and/or Assets of a type which would normally be considered of regional importance that have been partially damaged or assets of a type which would normally be considered of national importance that have been largely damaged (such that their inherent capability or

Asset importance	Criteria
	potential to make a contribution to the understanding or appreciation of the past has been diminished).
Negligible	<p>Relatively numerous types of remains; and/or findspots of artefacts that have no definite archaeological remains known in their context; and/or</p> <p>Assets of a type which will normally be considered of local importance that have been largely damaged (such that their inherent capability or potential to make a contribution to the understanding or appreciation of the past has been diminished).</p>

Direct Impact Magnitude

- 9.5.10 Potential direct impacts, that is the physical change to known heritage assets, and unknown buried archaeological remains, in the case of the Proposed Development relate to the possibility of disturbing, removing or destroying in situ remains and artefacts during ground breaking works on this site. The magnitude of the direct impact upon heritage assets caused by the Proposed Development is rated using the classifications and criteria outlined in Table 9.3.

Table 9.3 – Criteria for classifying direct impact magnitude

Impact Magnitude	Criteria
High	<p>Major loss of information content resulting from total or large-scale removal of deposits from a site; and/or</p> <p>Major alteration of a monument's baseline condition</p>
Medium	<p>Moderate loss of information content resulting from material alteration of the baseline conditions by removal of part of a site; and/or</p> <p>Moderate alteration of a monument's baseline condition</p>
Low	<p>Minor detectable impacts leading to the loss of information content; and/or</p> <p>Minor alterations to the baseline condition of a monument</p>
Marginal	<p>Very slight or barely measurable loss of information content; Loss of a small percentage of the area of a site's peripheral deposits; and/or</p> <p>Very slight alterations to the baseline conditions of a monument</p>
None	No physical impact anticipated

Direct Effect Significance

- 9.5.11 The predicted level of direct effects on each heritage asset is determined by considering the feature's importance in conjunction with the predicted magnitude of the impact. The method of deriving the level of a direct effect and effect significance is provided in Table 9.4.

Table 9.4 – Level of direct effect based on inter-relationship between the importance of the heritage feature and the impact of magnitude

Impact Magnitude	Importance of Asset			
	Negligible	Local (Low Sensitivity)	Regional (Medium Sensitivity)	National/International (High Sensitivity)
High	Minor-Moderate	Moderate	Moderate-Major	Major
Medium	Minor	Minor-Moderate	Moderate	Moderate-Major
Low	Negligible	Minor	Minor-Moderate	Moderate
Marginal	Negligible	Negligible	Minor	Minor-Moderate

9.5.12 Using professional judgment and with reference to the Guidelines for Environmental Impact Assessment (as updated) (IEMA, 2016), this assessment considers moderate and greater effects to be significant, while minor-moderate and lesser effects are considered not significant

Indirect Effect Assessment

Relative Sensitivity

9.5.13 Determining the relative cultural value of an asset is essential for establishing its importance. As set out in HEPS (HES 2019a) and its accompanying Designation Policy and Selection Guidance (2019b) a determination of value can be made with reference to the intrinsic, contextual and associative characteristics of an asset. HEPS Designation Policy and Selection Guidance (2019b) indicates that the relationship of an asset to its setting or the landscape makes up part of its contextual characteristics. The Xi'an Declaration (ICOMOS 2005) set out the first internationally accepted definition of setting with regard to cultural heritage assets, indicating that setting is important where it forms part of or contributes to the significance of a heritage asset. SPP does not differentiate between the importance of the asset itself and the importance of the asset's setting. Indeed, under the section on Scheduled Monuments it states that '*where there is potential for a proposed development to have an adverse effect on a scheduled monument or on the integrity of its setting, permission should only be granted where there are exceptional circumstances*' (Scottish Government 2014). However, it is widely recognised (Lambrick 2008) that the importance of an asset is not the same as its sensitivity to changes to its setting. Elements of setting may make a positive, neutral or negative contribution to the value of an asset (Historic England 2017). Thus, in determining the nature and significance of impacts upon assets and their settings by the development, the contribution that setting makes to an asset's value and importance and thus its sensitivity to changes to setting need to be considered.

9.5.14 This approach recognises the importance of preserving the integrity of the setting of an asset in the context of the contribution that setting makes to the experience, understanding and appreciation of a given asset. It recognises that setting is a key characteristic in understanding and appreciation of some, but by no means all, assets. Indeed, a nationally important asset does not necessarily have high sensitivity to changes to its setting (e.g. does not necessarily have a high relative sensitivity). An asset's relative sensitivity to alterations to its setting refers to its capacity to retain its ability to contribute to our understanding and appreciation of the past in the face of changes to its setting. The ability of an asset's setting to contribute to an understanding, appreciation and experience of the asset and its value also has a bearing on the sensitivity of that asset to changes to its setting. While all nationally important heritage assets are likely to be sensitive to direct impacts, not all will

have a similar sensitivity to impacts on their setting; this would be true where setting does not appreciably contribute to their value or importance. Assets with high sensitivity to indirect settings impacts may be vulnerable to any changes that affect their settings, and even slight changes may reduce their information content or the ability of their settings to contribute to the understanding, appreciation and experience of them. Less sensitive assets will be able to accommodate greater changes to their settings without material reduction in their ability to contribute to our understanding of the past and in spite of such changes the relationship between the asset and its setting will still be legible.

9.5.15 The criteria for establishing an asset’s relative sensitivity to changes to its setting is detailed in Table 9.5. This table has been developed based on AOC’s professional judgement and experience in assessing setting impacts. It has been developed with reference to the policy and guidance noted above including SPP, HEPS (2019a) and its Designation Policy and Selection Guidance (HES 2019b), the Xi’an Declaration and Historic Environment Scotland’s guidance on the setting of heritage assets (2016).

Table 9.5 – Criteria for establishing relative sensitivity of a heritage asset to changes to its setting

Relative Sensitivity	Criteria
High	<p>An asset whose setting contributes substantially to an observer’s understanding, appreciation and experience of it should be thought of as having High Sensitivity to changes to its setting. This is particularly relevant for assets whose setting, or elements thereof, contribute directly to their significance (e.g. form part of their Key or Contextual Characteristics (HES, 2019, Annex 1). For example, an asset which retains an overtly intended relationship with its setting and the surrounding landscape. These may in particular be, but are not limited to, assets such as ritual monuments which have constructed sightlines to and/or from them or structures intended to be visually dominant within a wide landscape area e.g. castles, tower houses, prominent forts etc.</p> <p>Setting is the way in which the surroundings of a historic asset or place contribute to how it is experienced, understood and appreciated. Therefore, an asset, which relies heavily on its modern surroundings for its understanding, appreciation and experience, is of high sensitivity. In particular an asset whose setting is an important factor in its protection and in retention of its cultural value (as per SPP (2014) definition of setting).</p>
Medium	<p>An asset whose setting contributes moderately to an observer’s understanding, appreciation and experience of it should be thought of as having Medium Sensitivity to changes to its setting. This could be an asset for which setting contributes to value but whereby its value is derived mainly from its other qualities (HES, 2019 Annex 1). This could for example include assets which had an overtly intended relationship with their setting and the surrounding landscape but where that relationship (and therefore the ability of the assets’ surroundings to contribute to an understanding, appreciation and experience of them) has been moderately compromised either by previous modern intrusion in their setting or the landscape or where the asset itself is in such a state of disrepair that the relationship cannot be fully understood.</p>

Relative Sensitivity	Criteria
	<p>An asset, the current understanding, appreciation and experience of which, relies partially on its modern aesthetic setting regardless of whether this was intended by the original constructors or users of the asset.</p> <p>An asset whose setting is a contributing factor to its protection and the retention of its cultural value</p>
Low	<p>An asset whose setting makes some contribution to an observer's understanding, appreciation and experience of it should generally be thought of as having Low Sensitivity to changes to its setting. This may be an asset whose value is mainly derived from its other characteristics and whereby changes to its setting will not materially diminish our understanding, appreciation and experience of it. This could for example include assets which had an overtly intended relationship with their setting and the surrounding landscape but where that relationship (and therefore the ability of the assets' surroundings to contribute to an understanding, appreciation and experience of them) has been significantly compromised either by previous modern intrusion to its setting or the landscape or where the asset itself is in such a state of disrepair that the relationship cannot be determined.</p>
Marginal	<p>An asset whose setting makes minimal contribution to an observer's understanding, appreciation and experience of it should generally be thought of as having Marginal Sensitivity to changes to its setting. This may include assets for which the original relationship with their surrounding has been lost, possibly having been compromised by previous modern intrusion, but who still retain cultural value in their intrinsic and possibly wider contextual characteristics</p>

9.5.16 The determination of a heritage asset's sensitivity to indirect impacts upon its setting is first and foremost reliant upon the determination of its setting and the elements of setting which contribute to its cultural value and an understanding and appreciation of that cultural value. The criteria set out in Table 9.5 are intended as a guide. Assessment of individual heritage assets is informed by knowledge of the asset itself, of the asset type if applicable and by site visits to establish the current setting. This allows for the use of professional judgement and each heritage asset is assessed on an individual basis. Individual heritage assets may fall into several of the sensitivity categories outlined above, e.g. a country house may have a high sensitivity to alterations within its own landscaped park or garden, but its level of sensitivity to changes may be less when considered within the wider landscape context.

9.5.17 In establishing the relative sensitivity of an asset to changes to its setting, the setting must first be identified. Appendix 9.2 outlines the range of factors considered when establishing the setting of an asset and therefore determining sensitivity. These have been used as a guide in assessing each asset from known records and in the field.

Indirect Impact Magnitude

9.5.18 The indirect impact magnitude upon the setting of heritage assets by the Proposed Development is an assessment of the magnitude of change to the setting of any given heritage asset, in particular those elements of the setting that inform its cultural value. Assessments of impacts upon the setting

of heritage assets have been informed by site visits and GIS analysis as necessary. Table 9.6 outlines the main factors considered when assessing indirect impact magnitude.

Table 9.6 – Factors affecting magnitude of setting impact

Site Details	Importance of Detail for Assessing Indirect Impact Magnitude
Proximity to the Proposed Development (for this assessment this is measured to the nearest turbine)	Increasing distance of an asset from the Proposed Development will, in most cases, diminish the effects on its setting.
Visibility of Proposed Development	<p>The proportion of the view from each asset which will feature the Proposed Development will also affect the magnitude of impact.</p> <p>The existence of features (e.g. tree belts, forestry, landscaping or built features) that could partially or wholly obscure the development from view, will also affect the magnitude of impact.</p>
Complexity of landscape	The more visually complex a landscape is, the less prominent the new development may appear within it. This is because where a landscape is visually complex the eye can be distracted by other features and will not focus exclusively on the new development. The presence, extent, character and scale of the existing built environment and how the Proposed Development compares to and fits in with this also affects the magnitude of setting impact (HES 2016).
Design of Development	This refers to the perceived scale of the proposed change relative to the scale of the historic asset or place and its setting. Depending on the individual asset, the design of the Proposed Development could affect the perception of dominance or foci of a particular asset and its relationship with other cultural and natural features within the landscape (SNH 2017). For example, whether the development would be seen against the skyline or against a backdrop of hills may affect the perception of the prominence of an asset and/or the Proposed Development.

9.5.19 It is acknowledged that Table 9.6 above primarily deals with visual factors affecting setting. While the importance of visual elements of settings, e.g. views, inter-visibility, prominence etc., are clear, it is also acknowledged that there are other, non-visual factors which could potentially result in setting impacts. Such factors could be other sensory factors, e.g. noise or smell, or could be associative. Where applicable these are considered in concluding about magnitude of impact upon setting.

9.5.20 Once the above has been considered, the prediction of the level of magnitude of impact upon setting will be based upon the criteria set out in Table 9.7 below. In applying these criteria, consideration will be given to the relationship of the Proposed Development to those elements of

setting which have been defined as most important in contributing to the ability to understand, appreciate and experience the heritage asset and its cultural value.

Table 9.7 – Criteria for assessing indirect impact magnitude

Impact Magnitude	Criteria
High	<p>Direct and substantial visual impact on a key sightline to or from an asset;</p> <p>Direct and substantial visual impact on a key ‘designed-in’ view or vista from a Designed Landscape or Listed Building;</p> <p>Direct severance of the relationship between an asset and its setting;</p> <p>An impact that changes the setting of an asset such that it affects the integrity of its setting (SPP 2014) and materially affects an observer’s ability to understand, appreciate and experience the asset</p>
Medium	<p>Oblique visual impact on an axis adjacent to a key sightline to or from an asset but where the key sightline of the asset is not obscured;</p> <p>Oblique visual impact on a key ‘designed-in’ view or vista from a Designed Landscape or Listed Building;</p> <p>Partial severance of the relationship between an asset and its setting;</p> <p>Notable alteration to the setting of an asset beyond those elements of the setting which directly contribute to the understanding of the cultural value of the asset;</p> <p>An impact that changes the setting of an asset such that an observer’s ability to understand, appreciate and experience the asset and its cultural value is marginally diminished.</p>
Low	<p>Peripheral visual impact on a key sightline to or from an asset;</p> <p>Slight alteration to the setting of an asset beyond those elements of the setting which directly contribute to the understanding of the cultural value of the asset;</p> <p>An impact that changes the setting of an asset, but where those changes do not materially affect an observer’s ability to understand, appreciate and experience the asset.</p>
Marginal	All other setting impacts

Indirect Effect Significance

9.5.21 The level of indirect effects on the setting of heritage assets is judged to be the interaction of the asset’s relative sensitivity (Table 9.5) and the magnitude of the impact (Table 9.7) and takes into consideration the importance of the asset (Table 9.2). The interactions determining level of effect on the setting of the heritage assets are shown in Table 9.8. A qualitative descriptive narrative is also provided for each asset to summarise and explain each of the professional value judgements that have been made.

Table 9.8 – Interactions determining level of effect on setting

Magnitude of Impact	Sensitivity or Importance of Receptor			
	Marginal	Low	Medium	High
High	Minor	Minor-Moderate	Moderate	Major
Medium	Negligible	Minor	Minor-Moderate	Moderate
Low	Neutral	Negligible	Minor	Minor-Moderate
Marginal	Neutral	Neutral	Negligible	Minor

9.5.22 Using professional judgment, and with reference to the Guidelines for Environmental Impact Assessment (IEMA, 2016), effects established as moderate and greater are defined as significant, while those determined to be minor-moderate and less, are considered not significant.

Cumulative Effect Assessment

9.5.23 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.

9.5.24 The cumulative assessment will have regard to the guidance on cumulative effects upon heritage assets as set out in Environmental Impact Assessment Handbook V5 (SNH & HES 2018) and will utilise the criteria for assessing setting impacts as set out above. The assessment of cumulative effects will 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 as agreed with North Ayrshire Council. Wind farms at scoping are not included in the cumulative assessment.

9.5.25 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 wind farms;
- the interrelationship between their zones of Theoretical Visibility (ZTV);
- the overall character of the asset and its sensitivity to wind farms;
- the siting, scale and design of the wind farms themselves;
- the way in which the asset is experienced;
- the placing of the cumulative wind farm(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 being assessed, upon the setting of the heritage asset under consideration.

9.5.26 This assessment is based upon a list of operational or consented developments along with developments where planning permission has been applied for. Cumulative developments are listed in EIA Report Chapter 5. While all have been considered, only those which contribute to, or have the possibility to contribute to, cumulative effects on specific heritage assets are discussed in detail in the text. Additionally, 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 minor/moderate level or greater. The setting of assets which would have an effect of less than minor/moderate level are unlikely to reach the threshold of significance as defined in Table 9.8.

Requirements for Mitigation

- 9.5.27 National and local planning policies and planning guidance outlined in Section 9.3 of this chapter, require a mitigation response that is designed take cognisance of the possible impacts upon heritage assets by a proposed development and avoid, minimise or offset any such impacts as appropriate. The planning guidance expresses a general presumption in favour of preserving heritage assets in situ. Their 'preservation by record' (i.e. through excavation and recording, followed by analysis and publication, by qualified archaeologists) is a less desirable alternative (SPP 2014, paras 137, 150; SICC 2014 policy HE4). The Town and Country Planning (Scotland) (Environmental Impact Assessment) Regulations 2017 require a description of measures envisaged to “avoid, prevent, reduce, or if possible, offset any identified significant adverse effects on the environment”. Regulation 29 sets out that mitigation measures include offsetting. The EIA Regulations also require Decision Notices for EIA development to include a description of the mitigation measures committed to within the EIA Report. Regulation 29 also clearly sets out that mitigation measures include offsetting.
- 9.5.28 The Proposed Development has been designed where possible to avoid direct impacts upon known heritage assets through careful siting of infrastructure. Where possible, impacts upon the setting of heritage assets have been avoided or minimised during the iterative design process. Where not possible, and in line with EIA Regulations, offset mitigation measures have been identified.

Assessment of Residual Effect Significance

- 9.5.29 The residual effect is what remains following the application of mitigation and management measures, and construction has been completed and is thus the final level of impact associated with the Proposed Development. The level of direct residual effect is defined using criteria outlined in Tables 9.2, 9.3 and 9.4. No direct mitigation is possible for indirect (setting) effects of the Proposed Development and therefore residual effects on the setting of heritage assets will be the same as predicted without mitigation.

Limitations to Assessment

- 9.5.30 This assessment is based upon data obtained from publicly accessible archives as described in the Data Sources in section 9.5.3 as well as walkover and coring surveys. Historic Environment Record data was acquired from WoSAS in June 2019 (Extract ID: AC1139). National Record for the Historic Environment data was acquired in June 2019 with an update in October 2019 and is current to this date. Historic Environment Scotland Designation data was downloaded from HES online portal in June 2019 and was further downloaded and checked in November 2019 and is current to this date.

Modifying Influences

- 9.5.31 Future baselines excepting the Proposed Development would largely be expected to mirror the current baseline. Any alteration to the baseline condition of the heritage assets within the site would likely relate to very gradual deterioration of upstanding structures as a consequence of natural weathering, topsoil deterioration and, in some cases, stock grazing. Warmer, drier summers and wetter winters are widely predicted as a result of climate change so that water table draw down would become more marked in the summer and would potentially affect preservation of any buried waterlogged remains or palaeoecological deposits. Periodic wetting and drying of buried remains could lead to their structural alteration and subsequent deterioration.
- 9.5.32 The setting of the site may be altered in the future through the construction and operation of cumulative developments.

9.6 Baseline Conditions

Designations

- 9.6.1 There are no designated heritage assets within the site (Figure 9.1).
- 9.6.2 There are 60 Scheduled Monuments, 56 Category A Listed Buildings, six Inventory Garden and Designed Landscapes and 17 Conservation Areas recorded within the 15km study area (Figure 9.4), whilst a further 31 Category B Listed Buildings and 23 Category C Listed Buildings are located within 5km of the site (Figure 9.3). The closest Scheduled Monument to the site is Outerwards, Roman fortlet (Site 10), located within moorland on the summit of a ridge c. 530m north-east of the site boundary. The majority of Listed Buildings are located within the settlements of Skelmorlie, Largs, Wemyss Bay, Greenock, Dunnoon and Rothesay or in smaller coastal hamlets. Skelmorlie Castle (Site 146) is the nearest Listed Building to the site, located c. 1km to the west. Of the six Inventory Garden and Designed Landscapes, Ardgowan (Site 134) is the closest to the site and is situated c. 5km north of the site boundary. Skelmorlie (Site 118) is the closest Conservation Area to the Site, located c. 1.3km north-west of the site.
- 9.6.3 Non-statutory sites which are noted on the HER as being ‘almost certainly’ (Non-Statutory Register (NSR) Code C) or ‘very likely’ (NSR Code V) of national importance’ have also been identified. These are assets which have previously been identified as potential candidates for inclusion in the schedule in the NSR. While the legislation for the NSR has been superseded and NSR sites are no longer mentioned in current planning or historic environment policies, these sites are generally considered to be of regional or greater importance. Only one such site has been identified within 5km of the site boundary: Martin Glen Cup-markings (Site 194).

Archaeological and Historical Background

Context

- 9.6.4 The site is currently occupied by enclosed rough grazing fields and open rolling moorland within the Skelmorlie Glen valley and the surrounding ridges and hills, between an elevation of 40m and 236m Above Ordnance Datum (AOD). The Skelmorlie Water is aligned north-east to south-west through the site with some of its smaller tributaries, such as the Fank Burn, cutting through other parts of the site.
- 9.6.5 The site is covered by brown forest soils in the west and non calcareous gleys, peaty and humic gleys, and some blanket peat in the east. Thus, the land is very slowly permeable to moisture and is mainly permanent pasture (Soil Survey of Scotland, 1982). The Historic Landscape Assessment (Historic Environment Scotland) indicates that much of the site comprises rough grazing with some areas in the east having undergone agricultural improvements since the 1700s and some land along the Skelmorlie Glen having been part of a 17th to 20th century designed landscape. The Scottish Palaeoecological Database (SPAD) does not record any palaeoecological sites within the site.

Prehistoric (10,000 BC – 43 BC)

- 9.6.6 There are no heritage assets of a prehistoric date recorded within the site. However, two prehistoric heritage assets are recorded within 1km of the site boundary. A cup marked stone (Site 194) is recorded approximately 670m north-west of the site. The cup marked stone is a smooth, slightly domed rock outcrop situated in rough grassland to the north of the Morlie Glen. At least six cup marks are recorded on the stone which were likely created in the Neolithic or Early Bronze Age (Appendix 9.3; Plate 1). Hut circles (Site 217) are also recorded in this area to the north-west of the site, c. 720m from the site boundary. The hut circles were recorded in 1970 by Newall and the largest, most northerly round house was excavated by Newall in 1971 (Newall, 1971). Walling, a palisaded ditch and bank material were encountered as well as an internal hearth. Finds were recovered from the interior such as quartz hammerstones, flints, a broken knife, and ceramic fragments. While several of the possible ‘round houses’ have been reassessed and interpreted as the probable remains of post-medieval shielings, one hut circle is still thought to be Late Bronze Age or Early Iron Age in date.

- 9.6.7 Within the wider area, prehistoric ritual and funerary practices are known to have taken place with surviving remains visible in the landscape. Three likely Late Neolithic to Early Bronze Age (3000BC – 1000 BC) cairns are recorded to the north of the Site (Appendix 9.3), all of which are designated Scheduled Monuments. ‘Kelly Bank Cottage, cairn 750m E of’ (Site 42; Appendix 9.3; Plate 2) is the nearest of the cairns, c. 1.2km from the Site with ‘Kelly Bank Cottage, cairn 1240m ENE of’ (Site 43; Appendix 9.3; Plate 3) and ‘Kelly Bank Cottage, cairn 1200m ENE of’ (Site 44; Appendix 9.3; Plate 4) are located in close proximity to one another c. 1.6km from the Site. A cairn with an associated cist is also recorded within 5km of the site boundary at Site 46, c. 3.5km to the north. These cairns are part of a diverse group of cairns in the uplands of the southern edge of the Clyde Valley, set in areas allowing good visibility to and from the monuments.
- 9.6.8 Later prehistoric activity is widespread in the surrounding area. Recorded to the south of the Site is Knock Fort (Site 18) (Appendix 9.3, Plate 5), approximately 2.6km from the Site, a Scheduled Monument comprising a prehistoric domestic and defensive fort. The fort is enclosed by a stony, turf covered rampart on the summit of The Knock and likely dates to the late Bronze Age or Iron Age period. Activity during these periods is prevalent in the wider landscape with further hillforts recorded at Castle Hill, fort (Site 14) (Appendix 9.3, Plate 6), c. 6.5km to the south of the site, and further afield, at Craigarloch Wood, fort (Site 3), c. 13km to the north-east; Marshall Moor (Site 28), located c. 15km to the east; and across the Clyde Estuary, Barone Hill, fort (Site 9) is located 14km from the site on the Isle of Bute. Late Bronze Age and Iron Age settlement is also apparent in the form of roundhouses recorded at Waterside Cottage (Site 27), c. 9km to the north; Hillside (Site 31), Lurg Moor (Site 26) and High Castlehill (Site 22), c. 6.5km, 10km and 13.8km to the north-east respectively; Burnbank Water (Site 47), Ladymuir (Site 46) and Castlehill (Site 30), c. 7km, 9.7km and 14.5km to the east, respectively; and Knockmade Hill (Site 29), c. 13.5km south-east of the site boundary.

Roman (43 BC – AD 410)

- 9.6.9 During the Roman period, the Site was located to the west of an area of Roman military activity. The western flank of the Antonine Wall, constructed from AD 142 onwards, extended across the Central Belt of Scotland from the Firth of Forth to the Firth of Clyde, and fortlets were established to overlook the Clyde estuary and its approaches. One such fortlet, Outerwards (Site 10; Appendix 9.3; Plate 7) is c. 530m north-east of the Site on a narrow ridge. The fortlet contains the remains of two stone structures and, following excavation by Newall in the 1970s, has been found to date to the mid-2nd century AD meaning. The fortlet is one of three outlying defensive positions near the Firth of Clyde, the others being forts at Lurg Moor (Site 34), c. 10km to the north-east, and at Bishopton c. 23km to the north-east of the site boundary. A Roman road (Site 260) traverses the centre of the fort, aligned roughly north-east to south (Appendix 9.3, Plate 8), although the broader route is based on conjecture. Another supposed Roman road (Site 261) links to this route, leading to the north-west, and crosses through the site itself. Again, this route is based on conjecture and no evidence for a Roman road was visible on aerial photographs consulted as part of this assessment or during the walkover survey. In fact, the route as recorded by the HER appears to be based on linking points on a map as described by Newall (1974). This route does not follow any natural ridge or natural topographic route through the landscape and was found during the walkover survey to cross deep burns and/or ascend/descend steep slopes including the Skelmorlie Water.
- 9.6.10 Further evidence of Roman activity in the area is limited; however, it is unclear whether this is a reflection of a genuine absence of further Roman activity or absence of archaeological investigation, particularly across the moorland. Local tradition identifies a former Roman watchtower at Site 23, the site of a 12th or 13th century motte located approximately 13km east of the site boundary. A ‘Roman Signal Station’ was recorded at Blackhouse Moor (Site 219) by Newall in 1964; however, later surveying could find no evidence for the monument and identified only a natural swell and late turf dyke in the area.

Early Historic and Medieval (AD 410-1560)

- 9.6.11 There is presently no known archaeological evidence for early historic or medieval activity within the site and surrounding 1km study area. Settlement is, however, known in the surrounding area as Largs, to the south of the site, was established by at least the 13th century and Skelmorlie was settled

by the beginning of the 16th century. Skelmorlie Castle (Site 146; Appendix 9.3; Plate 9) was originally built in 1502, c. 1km to the west of the site boundary and lands associated with the castle appear to have extended east within the site. The Skelmorlie Castle Local Landscape of Historic Interest, as designated by North Ayrshire Council, covers the area to the north and south of the Skelmorlie Water at the western end of the site, and part of the designed landscape associated with Skelmorlie Castle (Site 146) is recorded as extending within the site in the Historic Land-use Assessment.

- 9.6.12 The remains of other important medieval foci are still visible further afield. An early medieval chapel (Site 57) is recorded at a multiperiod site approximately 12.9km north-west of the site, having been established on top of prehistoric settlement. Several 13th century castles are recorded in the surrounding area such as Rothesay Castle (Site 51) on the Isle of Bute, approximately 11.8km west of the site, which possesses upstanding remains of the castle itself, chapel and moat, Dunoon Castle (Site 59), located 10km north-east of the site, and Duchal Castle (Site 4), located 10.5km to the east. Medieval tower houses are known across the Clyde Firth at sites such as Toward Castle (Site 52), built in the 15th century c. 9km east of the Site, and Barr Castle (Site 25), originally constructed in the early 16th century, which is located 14.5km south-east of the site. Motte sites, representative of medieval castles, are recorded at sites such as Duchal House (Site 23) c. 13km to the east, Pennytersal Farm (Site 24), c. 12.5km north-east, and Larabank Castle (Site 5), which is located 12.5km south-east of the site.

Post-medieval (AD 1560-1900)

- 9.6.13 Historic pre-Ordnance Survey (OS) maps of the site tend to be schematic but do offer some insight into understanding past land use within the site. Gordon's map published in 1646-1652 (not illustrated) shows north and south '*Skelmoirlay*', '*Knock*' and '*Lairgs*', all depicted within the land of the '*Cunningham*'[s]. The site appears to have been open land at that time, traversed by the Skelmorlie Water. Blaeu's map from 1654 (Figure 9.5) also illustrates the site within '*Cunninghamia*' and further annotation is offered. '*Martinglen*' is shown in the vicinity of the approximate location of the site, as are '*Dyks*', '*Toir*, (Site 203) '*Bax*', '*Honing*' and '*Sout Farding*'. An area of woodland is depicted within the site's approximate location, along the Skelmorlie Water, but no further detail of land use within the site is shown.
- 9.6.14 Roy's Military Map from 1752-1755 (not illustrated) depicts the site again in more detail and illustrates the farmsteads of '*Barr*' and '*Tor*' (Site 203) to the south-west of the site with surrounding ploughlands, some of which appear to have extend within the site boundary. The farmstead of '*Farthings*' is shown at the north of the site boundary and may have been located within it, with associated ploughlands extending into the north-west portion of the site. Another farmstead, '*Howays*' (Site 202), is depicted to the east, possibly also within the site boundary. Armstrong illustrates the site again in 1775 in the vicinity of the farmsteads of '*Barr*', '*Dyke*', and '*Fardings*' and further steadings are shown in the area such as '*Millrig*' (Site 259), '*Hanning*', '*Fosterly*', '*Grafts Yards*', '*Wood*' and '*Stockhartly*'. An area of moorland or marsh is shown in the approximate location of the site.
- 9.6.15 In the early 19th century, the site continued to be illustrated as open land surrounding the Skelmorlie Water, or Rigg hill Burn as is annotated on some maps. Ainslie's map from 1821 (not illustrated) depicts '*Farthings*' and '*Grasyards*' in the vicinity of the approximate site boundary and shows the landscape between these farmsteads as hilly, unoccupied terrain. Similarly, Thomson's 1832 map (Figure 9.6) illustrates '*Fardens*' to the north of the Rigg hill Burn with a track leading to it from the west and some surrounding open land and woodland. To the south of the burn, '*Brae*' is shown in the approximate location of Barr and the landscape is depicted as steep and hilly terrain.
- 9.6.16 The First Edition Ordnance Survey (OS) maps (25 inch (not illustrated) and six inch to the mile (Figure 9.7)), surveyed in 1855, offer the first accurate detail of the site and surrounding area. Whilst post-medieval settlement is known to have abounded by the coast to the west of the site, the OS maps confirm that there was at least dispersed settlement within the site itself. In the area to the north of the Skelmorlie Water, the farmsteads of North (Site 197) and South Fardens are depicted amongst enclosed, improved fields in the western half of the site. Both farmsteads comprise one large roofed building and smaller outbuildings with tracks leading to them from the west. An old sandstone quarry is illustrated to the north of South Fardens and another is depicted further east. The eastern

portion of the site is shown as moorland which was split into large enclosed fields shown by field boundary lines on the map. Within the site, the area to the south of the Skelmorlie Water is also shown to be a mixture of enclosed agricultural fields and moorland with some dispersed development. Barr farmstead is shown just beyond the south-western extent of the site from which a track leads north-east, traversing the fields within the site. A dam is shown in the south-west corner of the site in association with a sandstone quarry. Two ruinous buildings are also depicted within the site boundary, one at 'Torr' (Site 203) and the other at 'Howies' (Site 202), both of which are shown as single unroofed, rectangular buildings. Another small rectangular building (Site 262) is noted to the north of an access track, approximately 160m south-west of 'Howies' ruins (Site 202).

- 9.6.17 Woodland is depicted along the banks of the Skelmorlie Water and some of its smaller tributaries and numerous waterfalls are shown. The woodland at the western side of the site is included within the Skelmorlie Castle Local Landscape of Historic Interest as it was within the estate grounds of Skelmorlie Castle. Woodland associated with the castle was supposedly planted by the mid-17th century with further blocks planted by the mid-19th century (Parks and Gardens, 2019). Leighton (1840: 220) described the grounds in the 19th century as *'beautifully laid out, and covered every where with rich and luxuriant wood'*.
- 9.6.18 The Second Edition 25 inch to the mile OS map, published in 1897 (Figure 9.8), shows the landscape in a similar manner, as enclosed fields and moorland beyond the limits of the coastal settlements, although some changes are noted. North Fardens farmstead is no longer depicted and South Fardens is simply annotated as Fardens. The old quarries in this area are no longer shown and several fields are shown as having been enlarged. In the area to the south of the Skelmorlie Water, the unroofed buildings at Torr (Site 203) and Howies (Site 202) are still illustrated although these are no longer annotated. The only sign of the sandstone quarry in the south-west corner of the site is the mill dam, indicating that the quarry was no longer in use. Woodland is still shown on the banks of the Skelmorlie Water and its tributaries although minimised in some areas.
- 9.6.19 Numerous post-medieval heritage assets are recorded within 1km of the site. There is evidence of further isolated settlement such as those at East Grassyards (Site 206), Kelly Bank (Site 208), Outerwards (Site 212), and Skelmorlie Water (Site 213-214). Associated enclosures, likely related to post-medieval agricultural activity, are also recorded within the 1km study area such as the enclosures at Kelly Burn (Site 196), Skelmorlie Water (Site 213) and Noddsdale Water (Site 200), and sheepfolds at Noddsdale Water (Site 199), Search Hill (Site 201), and east of Skelmorlie Water (Site 239). Further land management for agricultural use of the landscape is evidence by old drainage lines, field clearance, ditches, field boundaries and stone or turf dykes such as the assets at Site 215-216, 218, 223, 225-226, 229-230, 232, 234, 236-237, 239-241, and 246-247. Trackways provided access through the landscape with remains for disused tracks visible in the landscape such as the remains at Site 20.
- 9.6.20 Evidence of post-medieval industrial activity is also noted and ranges from evidence of watermills (Site 195) to small-scale quarrying (Sites 198, 207, 222, 242-245). Skelmorlie Reservoir (Site 220) and filter beds (Site 221) were also established in the post-medieval period for Skelmorlie Water Works approximately 850m north-west of the site.
- 9.6.21 Within the 5km and 1km study areas, numerous post-medieval assets are recorded, many of which are designated Listed Buildings, Scheduled Monuments and Inventory Garden and Designed Landscapes, and are often contained with Conservation Areas including Skelmorlie, Inverkip, Lochwinnoch, Rothesay, and Millport amongst others. The assets range from isolated dwellings to manor houses and estates to industrial aqueduct networks (see Site Gazetteer, Appendix 9.1).

Modern (Post-1900)

- 9.6.22 The 1911 six inch to the mile OS map (not illustrated) shows minimal change within the site boundary. No changes to land use are noted and Fardens farmstead is still shown in the northern half of the site. Likewise, there are no major changes within the site on the 1962 1:2,500 scale OS map (Figure 9.9); the only noticeable alterations are previously abandoned buildings (i.e. Site 202, 203 and 262) that are no longer shown and a row of buildings (Site 232) depicted along the track leading north-east from Barr Farm. From later cartographic evidence and aerial photography these appear to have been demolished by the 1970s.

- 9.6.23 Evidence for modern activity within the site is evidence by modern pipes for land drainage (Sites 227, 231, 233, and 249) and dumps of concrete, stone and iron (Site 228). Modern laid tracks are also recorded within the site, many of which likely follow the alignment of earlier routes.
- 9.6.24 Modern heritage assets in the wider study area include several military sites such as a 20th century Royal Observation Corps station (Site 254) at the south-western end of the proposed access track to the site, Second World War bombing decoy control bunker (Site 38), located c., 8.5km north-east of the site, battery and defences (Site 60), c. 8.5km to the north-west.
- 9.6.25 Other modern assets in the wider are related to settlement development with 20th century houses recorded in the surrounding area such as Windyhill, Rowantree Road Kilmacolm (Site 71) as well as modern churches (i.e. Site 75, 89 and 91) and railway stations i.e. Wemyss Bay (Site 73).

Site Walkover

- 9.6.26 An archaeological walkover survey of the site was undertaken from Monday 19th September to Wednesday 21st September 2019. The weather was mostly clear and dry with occasional, very short rain showers. The walkover survey of the proposed access track was undertaken on Monday 21st October 2019 and Monday 18th November 2019 in clear and dry weather. The aim of the walkover surveys was to identify any previously unknown remains within the site boundary. All known and accessible heritage assets were assessed in the field to establish their survival, extent, significance and relationship to other sites. Any conditions affecting the visibility during the survey were also recorded. All heritage assets encountered were recorded and photographed. A hand-held United States Navstar Global Positioning System (GPS) was used to note and confirm the position of each asset. All assets were marked on plans, at a relevant scale, keyed by means of Grid References to the Ordnance Survey mapping.
- 9.6.27 The site crosses several ridgelines and valleys, most of the valleys are located along burns orientated east to west, or north-east to south-west and these feed into the river called the Skelmorlie Water which bisects the site. Numerous smaller burns feed into these major burns from the north and south. These smaller burns were relatively easy to cross due to the time of year that the site was visited. However, the deeper, major burns that are orientated east to west or north-east to south-west required detours to access other areas of the site. This was due to steeper, often tree covered slopes leading down to the burns. Notwithstanding the difficult nature of these slopes the burns were not visible due to the tree cover; therefore, the depth and speed of the flowing water and any crossing points could not be easily discerned. These factors also applied to the Skelmorlie Water; although observations were taken at the top of the river water, the Skelmorlie Water and its steep riverbanks were not accessed. Therefore, the site was walked in two distinct areas and accessed at two points; the track that leads to Fardens Farm in the north of the site and a concrete track that accesses Barr Farm on the south-west corner of the site.
- 9.6.28 The nature of the land was a mixture of slightly boggy, marshy hillside and pastoral land; certain areas of the pasture fields had substantial marshy areas which were passable due to the time of year that the site was visited. Sheep and cattle were present across some of the site; there were no field boundaries between the grazing cattle and the track that led to Fardens Farm.
- 9.6.29 The area north of Skelmorlie Water was noticeable for the metal drainage pipes present across the landscape, with notable examples supported on concrete piers across steep sided burns, such as Site 231 (Plate 10). Site 249 on the northern boundary of the site at Frank Burn had a metal valve fixture; presumably to divert water into a connecting pipe (Plate 11). The nature of these pipes seems to be more substantial than the pipework that would be required to just supply pastoral fields from a farm; it is likely that they form part of a reservoir network across the landscape in the northern half of the site directing water into appropriate burns. It is possible that such a pipe network connects to Outerwards Reservoir, which is situated 570m to the south-east of the site.
- 9.6.30 HER data from WoSAS indicated that a Roman road or track could cross the site. It should be noted that these road alignments are based upon areas of Roman road mapped at a considerable distance from the site; the exact nature of any alignments through the site is unknown as is their composition and potential survival.

- 9.6.31 With the exception of the track leading from the north-east corner of the site to the Scheduled Outerwards Roman fortlet at Site 10, 530m to the north-east of the site, no Roman roads or tracks were identified in the site or near the site. The proposed alignments of the Roman roads or tracks across the site did not appear to be suitable alignments during the walkover survey; such alignments would frequently cross changes in topography and deep burns (Plates 12-13). Even given the probability that the Roman infrastructure in the site was of a smaller scale to handle such changes, it could be seen that these were not the best alignments for crossing the site.
- 9.6.32 Only one area of the site showed a feature that lined up with a proposed Roman road or track. This was an earthen bank north of Fardens Farm (Site 234; Plate 14). However, this bank proved to be relatively short with an irregular u-shaped end, the bank itself was also irregular in nature. Although, it cannot definitely be ruled out that this feature used to be a Roman road or track which has been subject to change since it went out of use, the feature was assessed as natural in nature.
- 9.6.33 The majority of the assets recorded during the walkover survey were old field boundaries, consisting of partially ruined drystone walls and banks (Plates 15-16). These matched the existing field boundaries noted during the walkover survey; the new boundaries tended to consist of barbed wire fencing closely paralleling the former land boundaries. One drystone wall, along the western edge of the site boundary, appeared to be a wall related to Skelmorlie Castle estate boundary (Site 248).
- 9.6.34 Site 238 (Plate 17) in the north-east portion of the site on the east side of the Skelmorlie Water was recorded as a large collection of moulded stone with a section of visible drystone wall approximately 0.5 m in height, a section of corrugated metal was observed. This structure is possibly a sheepfold or structure or associated with pastoral farming activities in the vicinity.
- 9.6.35 Site 242 (Plate 18) is an unusual structure; a large sub-oval hollow aligned west to east on a north facing slope. There were large stone boulders at the south-east end with an irregular mound of smaller stones collected at the north-west end. The purpose of this structure is unclear although the Ordnance Survey map of 1857 may provide a few clues. To the north of Site 244 on the other side of a land boundary an 'Old Quarry (sandstone)' is depicted and labelled as well as a Triangulation Station. Therefore, this structure could be associated with the quarry. However, it is also possible that Site 242 marks the site of a temporary shelter for surveyors mapping the landscape in the 19th century.
- 9.6.36 Sites 243 to 245 (Plates 19-21) signify features associated with a quarry on the hillslope in the eastern half of the site. These features are not depicted on any map. Site 243 marks the quarry with Sites 244 and 245 identified as dumps of waste material. These sites are undated, however, the dumps of Sites 244 and 245 were not totally grassed over and this level of grass accumulation suggests that they could date to the post-medieval period.
- 9.6.37 Site 235 (Plate 22) marks the turf and tree covered remains of potential walls along the lane leading north-east from Barr Farm. Two courses were visible of good quality stonework and this site seems to match the location of a possible row of cottages visible on Frame 3027 on sortie SCOT B_0172 (NCAP Library Reference: CPE/Scot/UK/0261) undertaken on the 13th August 1947. The row of cottages was also recorded on frame 0161 from sortie SCOT B_0412 (NCAP Library Reference: 542/0145) undertaken on the 11th March 1955. By the time of the aerial photography undertaken in the 1970s these buildings appear to have been demolished and trees are visible in this location.
- 9.6.38 The proposed access track was found to be contained within pasture fields in its entirety. The route traverses the Meigle Burn where it is set within a strip of woodland. The only identified asset within the boundary of the access track was a stony mound (Site 251; Plate 23) measuring 8m x 3m x 1m which contained concrete blocks and is thought to be modern clearance or dumped material.
- 9.6.39 Modern overhead lines were also recorded within the site.

Aerial and satellite imagery

- 9.6.40 A review of vertical aerial photographs held by NCAP dating from 1946 to 1972 was undertaken on the 20th August 2019. A review of available oblique photographs and satellite imagery (google earth, ESRI mapping, Getmapping aerial data, and Scottish remote sensing LiDAR data) was also undertaken to inform this assessment. The imagery of the site and its immediately surrounding area shows an upland landscape, with evidence for post-medieval and modern dispersed, isolated

settlement and land management, primarily in the form of small-scale quarrying, field divisions and access tracks.

9.7 Receptors Brought Forward for Assessment

Receptors Brought Forwards for Assessment of Direct Effects

9.7.1 A total of 31 cultural heritage assets have been identified within the site. Their relative importance has been classified according to the method shown in Table 9.2 and the results are shown in Table 9.9 below.

Table 9.9– Archaeological and Cultural Heritage Importance of Heritage Assets within the site

Site No	Name	Description	Importance
197	North Fardens	Farmstead	Local
202	Skelmorlie Water / Howies	Farmstead	Local
203	Skelmorlie Glen / Torr	Farmstead	Local
211	Skelmorlie Water	Enclosure	Local
226	North of Fardens Farm	Field bank and ditch. Field boundary.	Local
227	Pipe north of Fardens Farm	Modern Pipe	Negligible
228	North-west of Fardens Farm	Concrete and stone with iron	Negligible
229	Boundary Wall, North of Fardens Farm	Dry stone wall (turf covered)	Local
230	Boundary Wall, North of Fardens Farm	Dry stone wall (turf covered)	Local
231	Pipe north of Fardens Farm	Modern Pipe	Negligible
232	East of Gouse Butts	Dry stone wall	Local
233	Pipe on Frank Burn	Modern pipe	Negligible
234	Bank at burn, north-east of Fardens Farm	Bank	Local
235	Settlement remain, north-east of Barr Farm	Wall	Local
236	East Side of Skelmorlie Water	Wall	Local
237	Clearance Cairn, east of Skelmorlie Water	Clearance cairn	Local

Site No	Name	Description	Importance
238	Sheepfold, east side of Skelmorlie Water	Sheepfold	Local
239	Land Boundary, east of Skelmorlie Water	Wall; boundary	Local
240	Land boundary near hill ridge	Wall (possible)	Local
241	Land boundary	Wall	Local
242	Surveyor Shelter (Possible)	Hollow with stone; structure; quarry; surveyor shelter	Local
243	Quarry	Quarry	Local
244	Quarry (possible)	Quarry (possible)	Local
245	Quarry dump (possible)	Quarry dump (possible)	Local
246	Land boundary	Structure	Local
247	Land boundary	Wall	Local
248	Skelmorlie Castle Wall	Estate wall	Local
249	Modern Drain	Modern drain with metal fixtures	Negligible
250	South of Grouse Butts	Loose rock/stone in possible hollow	Local
251	Field clearance, approximately 350m west of Barr Farm	Field clearance heap	Local
261	Roman Road, Rigghill	Possible Roman road, aligned roughly south-east to north-west	Local
262	Rectangular building, east of Skelmorlie Water	Building	Local

9.7.2 The majority of identified features within the site are related to post-medieval and modern settlement, agricultural practices, historical land division and land management. Modern land management is exemplified by modern drainage and piping and these features are judged to be of negligible importance in a cultural heritage context. The remains of boundary walls, ruinous dwellings and sheepfolds are typical of abandoned late post-medieval and early modern occupation evidence and these remains abound in the wider, upland landscape. Thus, these are judged to be of local importance. However, some of the features identified are subtle in nature and have an indistinct form and could thus potentially be of earlier date or natural origin. There is evidence of small-scale post-medieval quarrying within the site, an activity which has marked much of the wider

upland landscape and has limited potential to contribute to further understanding of post-medieval sandstone quarrying other than noting its presence. It is also possible that identified later features may obscure and/or incorporate earlier features and as such the importance levels should be read as indicative.

- 9.7.3 A possible Roman road is recorded within the site boundary in the HER; however, no visible archaeological remains of the route were encountered during the walkover survey. The route is largely based on conjecture and lacks evidentiary support, having last been documented in 1971 with the suggested course linking a series of specific points rather than reflecting the route on the ground (*pers comm* O'Hare, 2019). If remains of this road are present within the site boundary, these would be of regional or national importance depending on their condition; however, no archaeological remains are known within the site resulting in the importance of this site being reduced to local.

Receptors Brought Forwards for Assessment of Indirect Operational Effects

- 9.7.4 This assessment has identified 60 Scheduled Monuments, 56 Category A Listed Buildings, six Inventory Garden and Designed Landscapes and 17 Conservation Areas recorded within the 15km study area and 31 Category B and 23 Category C Listed Buildings located within 5km.
- 9.7.5 All designated assets located within the ZTV have been subject to detailed setting assessment. Additionally, all designated assets within the 15 km study area were reviewed against the information known about their contextual characteristics (refer to Appendix 9.1) and against mapping information to identify any instances where views of the Proposed Development with a given asset may significantly impact on their settings. One hundred and twenty-five assets have been identified located either beyond the limits of the ZTV or have no intervisibility with the Proposed Development and have not been taken forward for further assessment. These assets are listed in Appendix 9.4
- 9.7.6 A total of 19 Scheduled Monuments, 76 Listed Buildings, three Inventory Garden and Designed Landscapes and four Conservation Areas were subject to detailed setting assessment. Setting assessment site visits were undertaken in September 2019.

9.8 Standard Mitigation

- 9.8.1 National planning policies and planning guidance as well as the local planning policies require that account is taken of potential effects upon heritage assets by proposed developments and that where possible such effects are avoided. Where avoidance is not possible EIA Regulations require that effects on any significant remains be minimised or offset.
- 9.8.2 It is acknowledged that despite the walkover undertaken to inform this assessment, there may be further previously unrecorded subtle archaeological features within the site. The presence of peat within the site means that archaeological features may also be buried by peat growth, and therefore undetectable by survey. Given the presence of known and the potential for presently unknown archaeological remains, in particular of prehistoric, Roman and post-medieval date, to survive within the site, a programme of archaeological works will be undertaken prior to the commencement of construction of the Proposed Development.

Protection of Archaeological Sites

- 9.8.3 All known heritage assets within 50 m of the proposed working areas, including all areas to be used by construction vehicles, will be fenced off under archaeological supervision prior to construction. This fencing will be maintained throughout the construction period to ensure the preservation of these assets.
- 9.8.4 If further groundworks are required during the decommissioning works or if plant movements are required beyond the hardstanding comprising the turbine infrastructure, then all known sites within 50 m of the proposed working areas will be fenced off with a visible buffer under archaeological supervision. This will be undertaken prior to decommissioning in order to avoid accidental damage by heavy plant movement.

Archaeological Monitoring of Groundbreaking Works

- 9.8.5 The potential for known and previously unrecorded buried remains to be affected by the Proposed Development will be addressed by a programme of archaeological works, undertaken as a condition of planning consent which will be undertaken prior to the commencement of construction of the Proposed Development. A targeted programme of archaeological trail trench evaluation will be undertaken to investigate the possible route of the Roman road within and around the Proposed Development footprint. Following this an Archaeological Clerk of Works will be appointed and an archaeological watching brief will be undertaken on a representative proportion of ground breaking works. The purpose of such works will be to identify any archaeological remains threatened by the Proposed Development, to assess their significance and to mitigate any impact upon them either through avoidance or, if preservation *in situ* is not warranted, through preservation by record. Depending upon the results of the evaluation and any watching brief works there is the potential that further works, such as excavation and post-excavation analyses, could be required. Details of mitigation will be agreed with WoSAS on behalf of North Ayrshire Council through a Written Scheme of Investigation.
- 9.8.6 The Scottish Archaeological Research Framework (ScARF) notes a need for further research into bridges and other forms of river-crossing during the Roman period. It also calls for a better overview of the Roman road network in Scotland, considering all lines claimed as Roman (ScARF 2012, 23). Investigation of the putative Roman roads and river crossing within the site as part of archaeological mitigation works may contribute to these wider research questions. Any archaeological fieldwork commissioned in order to mitigate direct effects will result in the production and dissemination of a professional archive, which will add to our understanding of the cultural heritage value of the site.

Development Design

- 9.8.7 The turbine layout has been designed to reduce the impact on various designated assets and areas and as a result, the setting impacts on designated cultural heritage features have been reduced insofar as possible and practical. The Proposed Development layout has been designed to minimise impacts on the setting of the Outerwards Roman fortlet (Site 10) and Martin Glen cup marked stone (Site 194). Numerous design iteration options have been considered as detailed in Chapter 2. This includes a buffer of 1km from the fort in which no turbines have been placed, and also the removal and relocation of turbines to ensure uninterrupted views down the Skelmorlie Water towards the Firth of Clyde.
- 9.8.8 The LVIA Chapter 5 discusses the measures to reduce the appearance or visual presence of the turbines within the wider landscape. The proposed wind turbine layout has been designed to present a clearly structured, balanced arrangement which responds positively to key landscape features and local topography. Steps have been taken to promote a simple balanced composition that minimises overlapping turbines, skyline effects and back-grounding. Consideration has also been given to other design issues, including turbine colour, size and siting; the design and form of the substation building; and the alignment of access tracks to ensure these proposed features relate to the key characteristics of the landscape.
- 9.8.9 As setting effects largely result from the visual presence of the turbines within the landscape the same mitigation measures apply to setting effects on cultural heritage features.

9.9 Potential Effects

Construction Effects

- 9.9.1 Construction effects on cultural heritage receptors are limited to direct impacts on heritage assets and deposits. Indirect impacts upon the setting of designated heritage assets are considered under operational effects.
- 9.9.2 The Proposed Development has been designed to avoid direct impacts on known heritage features where possible. There would be minimal direct impacts from construction activities upon any other known features within the site, other than tracks likely required to access the northern part of the site which would cross the supposed route of a Roman road (Site 261).

- 9.9.3 The 1km study area and surrounding landscape is rich in cultural heritage remains from the prehistoric period onwards and as such there is potential for the existence of hitherto unknown remains to be present within the site. Map regression and aerial photographic analysis have shown that, except for small-scale quarrying, the site has been largely undisturbed pasture fields and moorland since at least the 19th century and as such it is likely that any remains that survive below ground surface within the site will be relatively undisturbed. Therefore, there is the possibility of disturbing hitherto unknown buried archaeological remains during groundworks associated with the Proposed Development. A mitigation strategy will be required to safeguard and, where necessary, record any such remains (further details of the proposed mitigation strategy are set out in section 9.8).
- 9.9.1 The Proposed Development may also impact on palaeoenvironmental deposits. Peat deposits within the site have the potential to preserve palaeoenvironmental remains. Any such remains have the potential to provide information on local vegetation change over time. Given the relatively small construction footprint of the Proposed Development, it is considered that the magnitude of impact on the palaeoenvironmental deposits will be 'low'. The direct effect would be negligible and not significant.

Operational Effects

- 9.9.2 Direct effects upon any previously unknown archaeological remains which may be present on the site would cease with the completion of the groundworks stage of construction and consequently no direct effects are predicted during the operational phase of the Proposed Development.
- 9.9.3 Operational phase effects include impacts upon the settings of assets such as World Heritage Sites, Listed Buildings, Scheduled Monuments, Conservation Areas, Inventory Battlefields and Inventory Gardens and Designed Landscapes. While there are no designated heritage assets within the site, this assessment has identified 60 Scheduled Monuments, 56 Category A Listed Buildings, six Inventory Garden and Designed Landscapes and 17 Conservation Areas recorded within the 15km study area and 31 Category B and 23 Category C Listed Buildings located within 5km. However, of these, 125 assets are beyond the limits of the ZTV or have no intervisibility with the Proposed Development.
- 9.9.4 All designated assets located within the ZTV have been subject to detailed setting assessment. Additionally, all designated assets within the 15 km study area were reviewed against the information known about their contextual characteristics (refer to Appendix 9.1) and against mapping information to identify any instances where views of the Proposed Development with a given asset may significantly impact on their settings. A total of 19 Scheduled Monuments, 76 Listed Buildings, three Inventory Garden and Designed Landscapes and four Conservation Areas were subject to detailed setting assessment. Setting assessment site visits were undertaken in September 2019.
- 9.9.5 The settings assessment found that the indirect effect of the Proposed Development upon the setting of one Scheduled Monument, Outerwards, Roman fortlet (Site 10) fort would be **moderate** and significant in EIA terms, as reported below. The assessment found that the effect of the Proposed Development on the setting of the remaining 67 designated assets would not be significant as the effect levels would be **neutral** to **minor/moderate**. These findings are detailed in Table 1 within Appendix 9.4. A summary discussion for the assets subject to detailed assessment is provided within Table 1 of Appendix 9.4 and has been informed by ZTV modelling, site visits, photomontages and wireframes (Figures 9.10-9.13) as appropriate.

Outerwards, Roman fortlet (Site 10)

- 9.9.6 The Scheduled Monument of Outerwards, Roman fortlet comprises the upstanding remains of a small Roman fortlet dated to the mid-2nd century. The fortlet was constructed in conjunction with the Antonine Wall, in order to monitor and control the western coastal flank. It is of national importance as it retains visible remains of a defensive Roman fortlet and contributes to our understanding of Roman activity within Scotland.

- 9.9.7 The monument comprises a rampart, ditch and upcast mound and contains the remains of two stone buildings. The remains of a Roman road, aligned through the monument from north to south, are visible and there are entrances at both of these sides: the one to the south is centrally positioned and the one to the north is slightly offset to the north-eastern side (Newall, 1976). It is possible that the stone structure may have had a tower up to 3m tall with multiple levels (Newall, 1976) which would have likely been highly visible in the surrounding area and likely designed to be seen to emphasise the presence and power of the Romans; although the reduced height of the remains make it difficult to understand any former dominating presence within the current landscape. The fortlet was subject to excavation by Newall in 1970 and the remains of a poorly backfilled trench are clearly visible within the monument making the upstanding earthworks of the monument somewhat difficult to interpret. However, it remains possible, from the visible remains of the ditch, rampart and mound, to understand and appreciate the monument as a defensive fort. The clear relationship of the fortlet with the Roman road greatly contributes to an understanding of the monument as part of a wider network of Roman features.
- 9.9.8 Outerwards, Roman fortlet is set within rough grazing moorland on a prominent west facing ridge occupying high ground to the east of the Skelmorlie Glen. It forms part of a network of Roman installations along the River Clyde and Firth of Clyde and would have had connections with Lurg Moor, Roman fortlet and Roman road (SM1653), c. 9.5km to the north-east, and Whitemoss Roman Fort, 175m SW of Rosarymount (SM1652), c. 19.5km to the east, as well as potentially undiscovered Roman sites in the wider area. The fortlet's position allows for extensive views inland to the north and east as well as across the Firth of Clyde to the west and south towards Bute, Cumbrae and Arran. Along with the fortlet at Lurg Moor, it would have been possible to observe and monitor 50km of the 55km stretch of the Clyde from the Antonine Wall terminus at Old Kirkpatrick to the southern tip of Rothesay Island (Symonds, 2018: 147). The site forms part of the wider setting of the fortlet within the open ground descending to the Skelmorlie Water and to the coast.
- 9.9.9 The fortlet is not on the highest point in the surrounding landscape nor is it set in a location where the western shoreline of the Firth of Clyde is fully visible due to the steeply descending ground. It appears therefore that the precise location of the fortlet was selected for its open views across the moorland to the north, for its views of the Brisbane Glen and for its views towards the opening of the Firth of Clyde as much as it was selected for views west to the Firth of Clyde and beyond. This visibility of multiple key transitional points in the landscape indicates that surveillance in all directions was of great importance to the Romans. The setting of the fortlet, in a strategic location with commanding views in all directions, thus greatly contributes to an understanding of its cultural value and it is of high sensitivity to changes within its setting.
- 9.9.10 The land to the north of the fortlet is open and gives a sense of remoteness with modern development limited to small turbines to the north-west and overhead lines to the north which do little to disrupt the openness of the landscape and do not impact on how the monument and its setting are appreciated and experienced. Views to the east also give a sense of remoteness, as no modern development is visible in this direction across the rising moorland. Views to the north-west to south-west are more complex. Modern development is visible in the wider setting: Largs is visible to the south and Skelmorlie to the west and ferry traffic is almost continuous shuttling between mainland Scotland, Cumbrae and Bute. Hunterston Power Station can also be seen to the south-west, although some distance away.
- 9.9.11 On approach from the west, the fortlet is only visible on the ridge once in relatively close proximity, from c. 600m away. Therefore, the Proposed Development would have no impact on views towards the monument from this direction as all turbines are over 1km distant. Approaching the monument from the north and south-east, where there are presently tracks leading to the monument, the Proposed Development would be visible beyond the fortlet. However, following the Roman road through the fortlet, focus is drawn to the monument itself and the line of the Roman road to the north and south.
- 9.9.12 All of the turbines within the Proposed Development, would be set over 1km from the monument, beyond the immediate rough moorland in which the monument is located. The turbines would be visible to below hub height and would be seen in an arc view from the north-west to the south-west. The turbines would span across the views towards to the Firth of Clyde and to the islands of Bute,

Arran and Cumbrae, a series of key strategic sightlines from the fortlet. However, as the appended photomontages (Figures 9.10d and 9.10e) shows whilst the skyline would be broken along much of the Firth of Clyde, there would be permeability of the views in these directions as the turbines have been designed and positioned to allow for unobstructed views down the Skelmorlie Glen and have been further designed so that there are openings in views towards Arran to the south-west. Additionally, the turbines would be set within one of the more complex skylines viewed from the fortlet with modern development and ferry traffic visible (as also seen within the photomontage). Thus, while these views would be altered, it would still be possible to understand and appreciate the importance of the views over the Firth of Clyde from the monument.

- 9.9.13 Views to the opening of the Firth of Clyde, beyond Largs, to the south-west would be unaltered by the Proposed Development, as would views inland and to the north, all of which are also integral to the cultural heritage importance of the monument. Therefore, the ability to understand that the monument was positioned to allow for extensive views for surveillance of the wider landscape in all directions would be maintained. The relationship between the monument and the Roman road to the north and south would be unaltered and the openness and bleakness of the moorland landscape to the north and east would still be appreciable. The essential character of the fortlet's setting as a remote and forbidding place would be the same. The Proposed Development would not be so close as to overwhelm or dominate the fortlet and would impact on one of multiple sightlines from the monument, the view which is already its most complex. Thus, the integrity of setting of the fortlet would not be adversely affected. The magnitude of impact would be medium. The level of effect would be **moderate** and significant in EIA terms.

Decommissioning

- 9.9.14 Detailed assessment of impacts on cultural heritage assets arising from the decommissioning phase have been scoped out of this assessment. A detailed assessment of the cultural heritage impacts of decommissioning the Proposed Development has not been undertaken as part of the EIA because: (i) the future baseline conditions (environmental and other developments) cannot be predicted accurately at this stage; (ii) the detailed proposals for decommissioning are not known at this stage, and (iii) the best practice decommissioning guidance methods will likely change during the lifetime of the Proposed Development.
- 9.9.15 In general, it is anticipated that direct impacts during the decommissioning phase would be limited and would only occur if new ground works are required beyond the areas disturbed during the original construction works and as such no significant direct effects are expected to arise from the decommissioning phase of the Proposed Development. If any such works were required they would be appropriately mitigated through the standard mitigation measures outlined in Section 9.8. All indirect operational effects upon the settings of designated assets would be reversed with the removal of the turbines following decommissioning, leading to a neutral and not significant effect.

9.10 Additional Mitigation

Archaeological Programme of Works

- 9.10.1 There would be no significant direct effects upon known heritage features as a consequence of the Proposed Development during construction, operation or decommissioning.

Heritage Interpretation Plan

- 9.10.2 This assessment has identified a **moderate** and significant effect on the setting of the Outerwards, Roman fortlet (Site 10), located 530m north-east of the site boundary and over 1km from the nearest turbine. In the case of the Proposed Development, a programme of works (undertaken as part of a Heritage Interpretation Plan (HIP)) would partially offset potential impacts of the Proposed Development on the setting of heritage assets in its vicinity. As an impact upon setting is ultimately an impact upon the ability of the surroundings of the monument to contribute to an observer's understanding, appreciation and experience of the asset, compensatory measures which will increase the understanding, appreciation and experience of the asset and the wider archaeology of the area, are therefore an appropriate way to offset such impacts (as per PAN 2/2011).

- 9.10.3 The proposed archaeological evaluation works to determine the presence, or absence, of the Roman road between Laxlie Hill and Blackhouse Manor (Site 160) prior to the construction of the Proposed Development will contribute to our understanding of the wider network of Roman roads associated with the forlet and could offer valuable information of how the Roman's utilised the area surrounding the forlet during its construction, occupation and abandonment. Analysis and, if possible, dating of evidence relating to Roman occupation will be used to improve our understanding and appreciation of the past setting of the fortlet and how it relates to its current setting and other Roman sites in the area.
- 9.10.4 The undertaking of a detailed review of present information regarding Outerwards, Roman fortlet (Site 10) and dissemination of information via an interpretation leaflet or schools pack will serve to increase both our understanding of the historic landscape of the site and also the understanding and appreciation of the setting of the Outerwards Roman fortlet. A series of way markers along the line of the Roman road and interpretation panels close to the fort (but outwith the Scheduled Area) could be created to provide interpretation and information regarding the fort, its relationship to the Antonine Wall and its location in the landscape. As well as 'static' enhancements like interpretation boards and/or way markers, and indeed to further inform interpretation, there is an excellent opportunity to provide a community training programme throughout the project. There is still much debate as to the location and route of Roman roads previously identified by Newall. A programme of community survey and excavation in advance of development would provide an opportunity to investigate this and contribute to wider research questions about Roman use of the local landscape in doing so the knowledge of local communities would be increased empowering them in understanding their local heritage. The ability to enjoy, appreciate, learn from and understand Scotland's historic environment, now and in the future, is one of the key principles outlined in HEPS (HES 2019; HEP2).

9.11 Residual Effects

Construction

- 9.11.1 The Proposed Development has been designed, where possible, to avoid direct impacts on known heritage features. The implementation of the above outlined mitigation measures will prevent inadvertent damage to known heritage features; and investigate the potential for previously unknown features. Following the completion of construction and decommissioning works no further groundworks would be undertaken. Following the implementation of mitigation measures there may be a slight loss of overall information content and as such a low magnitude of impact is anticipated. The residual direct effect would be negligible and not significant.

Operation

- 9.11.2 The predicted residual impacts on the settings of designated heritage assets will be the same as assessed for the operational and cumulative effects. There would be a **moderate** and significant residual effect on the setting of Outerwards, Roman fortlet. While there would be a notable alteration to the setting of the forlet and partial severance of one of the key sightlines to the Firth of Clyde, there would be permeable views towards the estuary and the importance of the relationship between the asset and the Firth of Clyde could still be understood, appreciated and experienced. The views inland and along the associated Roman road, deemed to also greatly contribute to the assets cultural heritage importance would not be affected. Thus, the overall integrity of the setting of the monument would not be adversely affected. No mitigation beyond that inherent in the Proposed Development design is possible for operational (setting) effects. However, in the case of the Proposed Development there is the potential that a programme of offset mitigation in the form of community survey, excavation and interpretation works, undertaken as part of an Heritage Interpretation Plan (HIP) would improve understanding and appreciation of the historic landscape setting of Outerwards Roman fortlet and thus partially offset potential impacts of the Proposed Development on the setting of the monument.
- 9.11.3 No other significant residual operational effects are anticipated.

Decommissioning

- 9.11.4 Direct impacts during the decommissioning phase would be limited and would only occur if new ground works are required beyond the areas disturbed during the original construction works. If any such works were required they would be appropriately mitigated through the standard mitigation measures outline in Section 9.8 and as such no significant direct effects are expected to arise from the decommissioning phase of the Proposed Development. All operational effects upon the settings of designated assets would be reversed with the removal of the turbines following decommissioning, leading to a neutral residual effect.

9.12 Cumulative Assessment

- 9.12.1 As set out above, cumulative effects relating to cultural heritage are for the most part limited to indirect effects upon the settings of heritage assets. While there can, in some rare cases, be cumulative direct effects, none are anticipated to result from the construction, operation or decommissioning of the Proposed Development. As such this assessment will consider the potential for cumulative effects upon the setting of heritage assets which have the potential to occur during the operational phase.
- 9.12.2 With regard to potential cumulative effects on cultural heritage assets, the assessment considers operational, consented and within-planning developments at distances up to 15km from the Proposed Development. The location of cumulative developments is shown on Figure 5.11 Developments at the scoping stage are not considered. Cumulative effects from the operational developments at High Mathernock and Priestsie Farm, Milour Hill and Milour Hill Extension, Kelburn, Hunterston II and Wardlaw Wood and the consented developments at Corlic Hill and Cairncurran Farm.
- 9.12.3 Cumulative impacts have been considered for those assets where the impact upon setting from the Proposed Development alone has been judged to be of **minor-moderate** level or greater and/or for assets which have been identified by consultees as requiring further assessment. This is because it is judged to be unlikely that cumulative impacts upon the setting of those monuments which would be subject to minor level effects (based on the Proposed Development itself) are unlikely to reach the EIA Regulation significance threshold. The following assets are thus considered for cumulative effects:

Table 9.10 - Summary of Cumulative Effects

Site No	Receptor Name	Receptor Sensitivity	Cumulative Impact Magnitude (adverse unless stated)	Level of effect
10	Outerwards, Roman fortlet	High	Marginal	Minor
18	Knock, fort; Scheduled Monument	High	Marginal	Minor
42	Kelly Bank Cottage, cairn 750m E of; Scheduled Monument	High	None	None

Site No	Receptor Name	Receptor Sensitivity	Cumulative Impact Magnitude (adverse unless stated)	Level of effect
137	Mount Stuart (Kirriemuir); Inventory Garden and Designed Landscape	High	None	None
194	Martin Glen; NSR Code C	High	None	None

- 9.12.4 The setting of Outerwards, Roman forlet (Site 10) relates to its extensive views inland and towards the sea and location along a ridge in association with a Roman road. Views inland to the north-west and south-west are restricted by rising ground meaning there is no visibility of any of the operational developments nor would there be visibility of the consented developments in these directions. Only the operational development at Hunterston II is presently visible from the monument, c. 14.2km to the south-east. The views of a single turbine tip alongside that of the Proposed Development would result in a marginal impact magnitude. The level of cumulative effect would be **minor** and not significant.
- 9.12.5 The setting of Knock, fort (Site 18) relates to its panoramic views on a natural mound with steep defensive slopes in all directions. Only the Hunterston II development is visible from the monument due to steeply rising ground inland to the north-east and south-east. The views of only one turbine tip alongside that of the Proposed Development would result in a marginal impact magnitude. The level of cumulative effect would be **minor** and not significant.
- 9.12.6 The setting of Kelly Bank Cottage, cairn 750m E of (Site 42) relates to its position within a topographic bowl with one key sightline, to the west towards the Firth of Clyde. None of the operational or consented developments are, or would be, visible from the monument. As such, there would be no cumulative effect on the setting of the monument.
- 9.12.7 Mount Stuart (Kirriemuir) Inventory Garden and Designed Landscape (Site 137) is set within dense woodland with designed key views largely directed towards Largs. Whilst there are extensive views across to the western coastline of the Firth of Clyde from the shore, there is no visibility of any of the operational or consented developments from the asset due to natural rises in the landscape on Cumbrae and the mainland. Thus, there would be no cumulative effect on the setting of this asset.
- 9.12.8 The setting of Martin Glen (Site 194) relates to the narrow valley it is set within and views down the valley to the west towards the Firth of Clyde. There is presently no visibility of any turbines nor would there be visibility of consented developments and, as such, there would be no cumulative effect on the setting of the monument.

9.13 Summary

- 9.13.1 This chapter identifies the archaeological and cultural heritage value of the site and study area and assesses the potential both for direct and indirect effects on archaeological features and heritage assets resulting from the construction, operation and decommissioning of the Proposed Development. This chapter also identifies measures that should be taken to mitigate predicted adverse effects.
- 9.13.2 A total of 31 known heritage assets are situated within the site. These assets range in date between the Roman and the modern period. One direct impact on a possible heritage feature is anticipated. A **minor** and not significant effect on any surviving remains associated with the possible route of the Roman road between Laxlie Hill and Blackhouse Manor (Site 160) has been identified. Where

- possible the Proposed Development has been designed to avoid direct impacts upon known heritage features within the site.
- 9.13.3 Remains of prehistoric to post-medieval date in and around the site indicate the potential for sub-surface archaeological deposits and features to exist. The presence of peat or organic rich soils in some limited areas of the site may also mask or contain historic environmental evidence within or underlying it.
- 9.13.4 Planning policies and guidance require that account is taken of potential effects upon heritage assets by proposed developments and that where possible such effects are avoided. Where avoidance is not possible, effects on any significant remains should be minimised or offset. Given the potential for presently unknown archaeological remains, in particular of Roman and post-medieval date, to survive within the site, a programme of archaeological works designed to avoid inadvertent damage to known remains and to investigate and mitigate against the possibility of uncovering hitherto unknown remains will be undertaken.
- 9.13.5 All known heritage features within 50 m of the Proposed Development (working areas) will be fenced off with a visible buffer under archaeological supervision prior to the start of the construction phase in order to avoid accidental damage by heavy plant movement.
- 9.13.6 To mitigate against the potential adverse effect on the Roman road between Laxlie Hill and Blackhouse Manor (Site 160), further non-intrusive survey works or intrusive archaeological evaluation will be undertaken to determine the presence or absence of a road within the site boundary and how this may relate to a wider network of Roman features in the landscape. No definitive visible remains of the road were identified during the walkover survey or during aerial reconnaissance.
- 9.13.7 To mitigate against the potential for previously unrecorded features to be impacted during the construction phase, an Archaeological Clerk of Works will be appointed and an archaeological watching brief will be undertaken on a representative proportion of ground-breaking works. The purpose of such works will be to identify any archaeological remains threatened by the Proposed Development, to assess their significance and to mitigate any impact upon them either through avoidance or, if preservation in situ is not warranted, through preservation by record. Details of mitigation will be agreed with WoSAS on behalf of North Ayrshire Council through a Written Scheme of Investigation.
- 9.13.8 Potential operational effects on the settings of 193 designated heritage assets have been considered in detail as part of this assessment as well as Martin Glen (Site 194), a feature of ‘almost certainly’ national importance although non-designated. A potential **moderate** significant operational effect on the setting of Outerwards, Roman fort (Site 10) has been identified.
- 9.13.9 In the case of the Proposed Development no direct mitigation is possible for operational (setting) effects; however, consideration of the setting of the monument has been taken into account during the design phase of the Proposed Development in order to retain permeability of views towards the Firth of Clyde and retain an open view down the Skelmorlie Glen. A programme of archaeological evaluation, community survey and excavation works, and subsequent interpretation, undertaken as part of a HIP, would improve understanding and appreciation of the historic landscape setting of Outerwards Roman fortlet and thus constitute offset mitigation to partially offset potential impacts of the Proposed Development on the setting of the monument (Site 10). The programme would increase understanding and appreciation of the landscape setting of the fortlet. Improved access and interpretation both on site and remotely (i.e. interpretation hubs, school packs, guided school visits, HER enhancement) could enhance visitors’ experience of heritage in the area and of the wider landscape in general. All products will become publicly accessible and free of charge, to local communities and local government agencies, making it available to any community groups who may wish to further develop the interpretation and presentation of local heritage assets.
- 9.13.10 The implementation of the above outlined mitigation measures will prevent inadvertent damage to known heritage features by investigating the potential for previously unknown features and disseminating the results of archaeological works to the public through a HIP. Following the implementation of mitigation measures there may be a slight loss of overall information content and as such a marginal magnitude of impact is anticipated. The residual direct effect would be **minor**

and not significant. There would be a **moderate** and significant residual effect on the setting of Outerwards, Roman fortlet (Site 10). Views towards the Firth of Clyde would still be permeable, although altered, and the Proposed Development will only have an impact on one sightline from the fortlet. It would still be possible to understand the monument as a defensive site set in a strategic location with extensive views of the landscape, particularly key areas of transition. The key relationship between the fortlet and the Roman road which is aligned through it would also be unaffected. Thus, the overall integrity of the setting of the monument would not be adversely affected.

- 9.13.11 The possibility of cumulative effects has been considered and assessed. No significant cumulative effects were identified.

Table 9.10 – Summary of Effects

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Construction					
Partial damage to Laxlie Hill and Blackhouse Manor possible Roman road (Site 160)	Minor	Adverse	Implementation of programme of archaeological works	Negligible	Adverse
Damage to hitherto unknown archaeological remains	Minor	Adverse	Implementation of programme of archaeological works	Negligible	Adverse
Operation					
Effect on setting of Outerwards, Roman fortlet (Site 10)	Moderate	Adverse	N/A	Moderate	Adverse
Effect on settings of Sites 18, 42, 137 and 194	Minor /Moderate	Adverse	N/A	Minor /Moderate	Adverse
Effect on settings of Sites 6, 7, 9, 14, 43, 44, 54, 59, 60, 61, 67, 74, 76, 107, 110, 118, 124, 125, 126, 134, and 135	Minor	Adverse	N/A	Minor	Adverse
Effect on settings of Sites 20, 38, 52, 53, 68, 69, 77, 79, 92, 93, 104, 157 and 175	Negligible	Adverse	N/A	Negligible	Adverse
Decommissioning					

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
N/A	N/A	N/A	N/A	N/A	N/A

Table 9.11 – Summary of Cumulative Effects

Receptor	Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
Cumulative Effect on Sites 10 and 18	Changes to setting	Hunterston II	Minor	Adverse

9.14 References

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Photographic References

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CPE/Scot/UK/0261	SCOT B_0172	13-08-1947	3026; 3029; 4031	SB_001166 SB_001169
542/0145	SCOT B_0412	11-03-1955	0160; 0162	SB_002015 SB_002017
106G/UK/1199	SCOT A_0124	30-11-1945	5124; 5126	SB_000235
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OS/64/0098	SCOT OS_59_16	05-07-1964	80-85	SB_003693
OS/72/0154	SCOT FD_S_NS_26_36-00	01-01-1972	20	SB_004473

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