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Environmental Impact Assessment Report

Swarclett Wind Farm

Chapter 10: Cultural Heritage

Swarclett Wind Energy Limited

wind2

June 2024

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Glossary of Terms

Term	Definition
The Applicant	Swarclett Wind Energy Limited
Environmental and Planning Consultant	Atmos Consulting Limited
Environmental Impact Assessment	Environmental Impact Assessment (EIA) is a means of carrying out, in a systematic way, an assessment of the likely significant environmental effects from a development.
Environmental Impact Assessment Regulations	The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (EIA Regulations)
Environmental Impact Assessment Report	A document reporting the findings of the EIA and produced in accordance with the EIA Regulations
Light Detection and Ranging (Lidar)	A remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth. Depending on the machine this can be used in either a terrestrial or underwater environment. Also known by its acronym LiDAR.
Proposed Development	Swarclett Wind Farm
Proposed Development Footprint	The area within which the Proposed Development will be located.
Proposed Development Site	The full application boundary, i.e. the red line boundary (Figure 1-1 Site Location).
Study Area	Four Study Areas comprising a core Study Area (the Proposed Development Site), and subsequent 1km, 5km and 10km Study Areas surrounding the Proposed Development Site
The Planning Act	The Town and Country Planning (Scotland) Act 1997 (as amended)

List of Abbreviations

Abbreviation	Description
agl	Above ground level
ALGAO	Association of Local Government Archaeologists Scotland
ANC	Association of Noise Consultants
CAR	Controlled Activities (Scotland) Regulations
CCC	Climate Change Committee
CCRA	Climate Change Risk Assessment
CEMP	Construction Environmental Management Plan
CIfA	Chartered Institute for Archaeologist
CMLI	Chartered Member of Landscape Institute
COP	Conference of the Parties
CO_2	Carbon dioxide
DBA	Desk-based Assessments
EnvCoW/ECoW	Ecological/Environmental Clerk of Works
ECU	Energy Consents Unit
EDAS	Economic Development Association Scotland
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report

Abbreviation	Description
ESJTP	Energy Strategy and Just Transition Plan
ESRI	Environmental Systems Research Institute
GHG	Greenhouse Gas
GIS	Geographic Information System
GPS	Global Positioning System
HEPS	Historic Environment Policy for Scotland
HER	Historic Environment Record
HES	Historic Environment Scotland
HET	Historic Environment Team
HGV	Heavy Goods Vehicle
HLAMap	Historic Land-use Assessment Map
HVAC	Heating, Ventilation, and Air Conditioning
HWLDP	Highland Wide Local Development Plan
ICOMOS	International Council on Monuments and Sites
IEMA	Institute of Environmental Management and Assessment
IOA	Institute of Acoustics
LDP	Local Development Plan
LiDAR	Light Detection And Ranging
LVIA	Landscape and Visual Impact Assessment
kV	Kilovolt
MW	Megawatt
NCAP	National Collection of Aerial Photography
NDC	Nationally Determined Contribution
NGR	National Grid Reference
NLS	National Library of Scotland
NNR	National Nature Reserve
NPF4	National Planning Framework 4
NRHE	National Record of the Historic Environment
NTS	Non-Technical Summary
OS	Ordnance Survey
PAC	Pre-Application Consultation
PACR	Pre-Application Consultation Report
PAN	Planning Advice Note
PAS	Planning Aid Scotland
RCAHMS	The Royal Commission on the Ancient and Historical Monuments of Scotland
SAC	Special Area of Conservation
SCADA	Supervisory Control and Data Acquisition
SES	Scottish Energy Strategy
SNH	Scottish Natural Heritage
SPA	Special Protection Area
SSSI	Sites of Special Scientific Interest
SuDS	Sustainable Drainage Systems
THC	The Highland Council

Abbreviation	Description
WLA	Wild Land Area
ZTV	Zone of Theoretical Visibility

10 Cultural Heritage

10.1 Introduction

This Chapter provides an assessment of the potential effects of the Proposed Development on cultural heritage and archaeology which could arise as a result of its construction, operation and decommissioning.

This assessment considers the potential for direct physical effects upon archaeological remains as well as the potential for operational and cumulative setting effects upon designated heritage assets. Where appropriate and if necessary, measures to mitigate or offset such effects are identified, and an assessment of the significance of residual effects, following the implementation of any mitigation, is also made.

The specific objectives of the Chapter are to:

1. Describe the cultural heritage and archaeology baseline;
2. Describe the assessment methodology used;
3. Describe the potential effects, including construction, operational, cumulative and decommissioning effects;
4. Describe the mitigation measures proposed to address likely significant effects; and
5. Assess the residual effects remaining following the implementation of mitigation.

The Chapter assesses cumulative effects as arising from the addition of the Proposed Development to other cumulative developments. Operational, under construction, consented developments and those which are the subject of a valid planning application are considered in the cumulative assessment.

This chapter has been produced by AOC Archaeology Group. AOC is 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' Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment (CIfA, 2020a), Standard and guidance for historic environment desk-based assessment (CIfA, 2020b) and follows IEMA's EIA Guidelines (as updated) (IEMA 2017).

This assessment contains sufficient information to meet the requirements for assessing potential impacts upon heritage receptors required by current planning regulations set out in the National Planning Framework for Scotland 4 (NPF4), Historic Environment Policy for Scotland (HEPS) and Planning Advice Note 2/2011 (PAN 2) and local planning policy.

The assessment has been prepared by Sam Williamson. Sam is a Senior Project Officer for AOC Archaeology Group and a Member of the Chartered Institute for Archaeologists (CIfA). Sam joined AOC in 2015 as a graduate and worked within the fieldwork sector for several years before moving into consultancy.

She has prepared a number of desk-based assessments, heritage impact assessments and environmental impact assessments for proposed wind farms, solar farms and other large infrastructure projects across Scotland and England. Overall quality assurance for the assessment has been provided by Victoria Oleksy who has extensive experience of environmental impact assessments across Britain.

Victoria is an Associate Director of AOC, a Member of the Chartered Institute for Archaeologists, and acts as an assessor for the Institute's Registered Organisation scheme.

10.2 Methodology and Approach

This assessment is based on the Proposed Development as described in Chapter 3: Description of Development. Overarching policies and legislation which pertain to the Proposed Development are detailed in Chapter 4: Planning and Energy Policy. The scope of this assessment has been informed by consultation responses summarised in Table 10-1 and the legislation, policy and guidance outlined below.

10.2.1 Legislation, Planning Policy and Guidance

Legislation

Relevant legislation and guidance regarding cultural heritage have been reviewed and considered as part of this assessment. Of particular relevance are:

- Ancient Monuments and Archaeological Areas Act (1979) as modified by the Historic Environment (Amendment) (Scotland) Act 2011;
- Historic Environment Scotland Act (2014);
- Planning (Listed Buildings and Conservation Areas) (Scotland) Act (1997) as modified by the Historic Environment (Amendment) (Scotland) Act 2011;
- Planning etc. (Scotland) Act (2006): 2006 asp 17; and
- Town and Country Planning (General Development Procedure) (Scotland) Order (1992).

Planning Policy

Relevant planning policy regarding cultural heritage includes:

- The National Planning Framework for Scotland (NPF4) (Scottish Government 2023);
- Historic Environment Policy for Scotland (HEPS) (Historic Environment Scotland (HES) 2019) and its supporting Designation Policy and Selection Guidance (HES 2020b);
- Our Past, Our Future: The Strategy for Scotland's Historic Environment (HES 2023);
- The Highland-wide Local Development Plan (HwLDP) (The Highland Council (THC) 2012);
- The Caithness and Sutherland Local Development Plan (CaSPlan; THC 2018); and

NPF4 (Scottish Government 2023), HEPS (HES 2019), PAN 2/2011 Archaeology and Planning (Scottish Government 2011) and THC's local development plans (2012a; 2018) deal specifically with planning policy and guidance in relation to heritage and collectively express a general presumption in favour of preserving heritage remains in situ and in an appropriate setting.

Their 'preservation by record' (i.e. through excavation and recording, followed by analysis and publication, by qualified archaeologists) is a less desirable alternative.

HEPS (HES 2019) 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. Historic Environment Policies (HEP) 3 and 4 both state that; "*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 2019, 9).

National Planning Policy

The NPF4 describes the Policy Principles for Historic assets and places (Policy 7) as follows:

> "*Policy Intent:*
>
> *To protect and enhance historic environment assets and places, and to enable positive change as a catalyst for the regeneration of places.*
>
> *Policy Outcomes:*
>
> - *The historic environment is valued, protected, and enhanced, supporting the transition to net zero and ensuring assets are resilient to current and future impacts of climate change.*
> - *Redundant or neglected historic buildings are brought back into sustainable and productive uses.*
> - *Recognise the social, environmental and economic value of the historic environment, to our economy and cultural identity.*" (Scottish Government 2023, 45).

The following policies of NPF4 Policy 7 are relevant to this assessment:

> "*a) Development proposals with a potentially significant impact on historic assets or places will be accompanied by an assessment which is based on an understanding of the cultural significance of the historic asset and/or place. The assessment should identify the likely visual or physical impact of any proposals for change, including cumulative effects and provide a sound basis for managing the impacts of change. Proposals should also be informed by national policy and guidance on managing change in the historic environment, and information held within Historic Environment Records.*" (ibid).
>
> "*... c) Development proposals for the reuse, alteration or extension of a listed building will only be supported where they will preserve its character, special architectural or historic interest and setting. Development proposals affecting the setting of a listed building should preserve its character, and its special architectural or historic interest.*" (ibid).
>
> "*h) Development proposals affecting scheduled monuments will only be supported where:*
>
> - *i. direct impacts on the scheduled monument are avoided;*
> - *ii. significant adverse impacts on the integrity of the setting of a scheduled monument are avoided; or*
> - *iii. exceptional circumstances have been demonstrated to justify the impact on a scheduled monument and its setting and impacts on the monument or its setting have been minimised.*
>
> *…o) Non-designated historic environment assets, places and their setting should be protected and preserved in situ wherever feasible. Where there is potential for non-designated buried archaeological remains to exist below a site,*

developers will provide an evaluation of the archaeological resource at an early stage so that planning authorities can assess impacts. Historic buildings may also have archaeological significance which is not understood and may require assessment.

Where impacts cannot be avoided they should be minimised. Where it has been demonstrated that avoidance or retention is not possible, excavation, recording, analysis, archiving, publication and activities to provide public benefit may be required through the use of conditions or legal/planning obligations.

When new archaeological discoveries are made during the course of development works, they must be reported to the planning authority to enable agreement on appropriate inspection, recording and mitigation measures." (ibid 46-47).

Local Planning Policy

The approach to development proposals which affect the historic environment in Highland are set out by THC in the HwLDP (THC 2012a) and CaSPlan (THC 2018).

Policy 57 Natural, Built and Cultural Heritage of the HwLDP states:

"All development proposals will be assessed taking into account the level of importance and type of heritage features, the form and scale of the development and any impact on the feature and its setting... The following criteria will also apply:

1. For features of local/regional importance we will allow developments if it can be satisfactorily demonstrated that they will not have an unacceptable impact on the natural environment, amenity and heritage resource.

2. For features of national importance we will allow developments that can be shown not to compromise the natural environment, amenity and heritage resource. Where there may be any significant adverse effects, these must be clearly outweighed by social or economic benefits of national importance. It must also be shown that the development will support communities in fragile areas who are having difficulties in keeping their population and services.

3. For features of international importance developments likely to have a significant effect on a site, either alone or in combination with other plans or projects, and which are not directly connected with or necessary to the management of the site for nature conservation will be subject to an appropriate assessment. Where we are unable to ascertain that a proposal will not adversely affect the integrity of a site, we will only allow development if there is no alternative solution and there are imperative reasons of overriding public interest, including those of a social or economic nature..." (THC 2012a, 110).

The following policies from the CaSPlan (THC 2018) are also relevant to this assessment:

"Environment and Heritage

Outcome: High quality places where the outstanding environment and natural, built and cultural heritage is celebrated and valued assets are safeguarded.

71 CaSPlan is home to a diverse range of renowned and celebrated built and cultural assets. The Plan balances the need to capitalise on these assets for social, economic, environmental and other needs, whilst safeguarding their unique character and qualities.

72 The natural and historic environment is rich, containing: internationally and nationally recognised sites, species and habitats; locally valued sites and landscapes; dramatic landforms, and a diverse cultural heritage. HwLDP policies provide safeguards for these features…" (THC 2018, 22).

Guidance

The following best practice guidelines and guidance have been used in preparing this assessment:

- Chartered Institute for Archaeologists (CIfA) Standard and guidance for commissioning work or providing consultancy advice on the historic environment 2020a), standard and guidance for historic environment desk-based assessment (2020b), Code of Conduct: Professional Ethics in Archaeology (2022), and Regulations for professional conduct (2021);
- THC's Standards for Archaeological Work (2012b);
- THC's Highland Historic Environment Strategy Supplementary Planning Guidance (2013);
- Managing Change in the Historic Environment guidance note series, particularly HES's Managing Change in the Historic Environment: Setting (HES 2020a);
- Our Past, Our Future: The Strategy for Scotland's Historic Environment (HES 2023);
- Scottish Natural Heritage (SNH) (now NatureScot) published guidance for Assessing the Cumulative Impact of Onshore Wind Energy Developments (SNH 2021); and
- NatureScot & HES's Environmental Impact Assessment Handbook v5 (SNH & HES 2018).

10.3 Consultation

Table 10-1 summarises the consultation responses received with regard to cultural heritage for the Proposed Development during the Pre-Application, Scoping and EIA reporting stages, and outlines where these responses have been addressed within the Chapter.

Table 10-1: Consultation

Consultee	Summary of Consultee Response	Where addressed within this Report
THC, Pre-Application Advice for 4 turbine layout (Planning reference: 21/03943/PREMAJ, 03 November 2021	• Requests Cultural Heritage Chapter as part of ES,[EIAR] to be informed by walkover survey and setting assessment	• Chapter 10 of the EIAR is presented accordingly, informed by walkover survey of Proposed Development Site and setting assessment of designated assets in surrounding study areas • Section 10.3.4 Walkover Survey • Technical Appendix 10.3 Setting Assessment • Section 10.4.2 Operational Effects
	• Request for consideration of	• Section 10.4.1 Construction

Consultee	Summary of Consultee Response	Where addressed within this Report
	direct and indirect impacts, the latter to be supported by photomontages	Effects and Section 10.4.2 Operational Effects, supported by visualisation Figures 5-2-2, 5-3-2, 10-10 to 10-20
	• Requests appropriate mitigation be proposed for unavoidable adverse impacts	• 10.5.1 Proposed Mitigation/Monitoring
HES, Pre-Application advice Case ID 300054118) for Land 975M SE of Mains of Durran, Castletown - Corsback Hill Wind Farm (now Swarclett Wind Farm) - Erection and operation of a wind farm comprising 4 turbines of up to 145m blade tip height and ancillary infrastructure (Planning reference: 21/03943/PREMAJ), 03 November 2021	• Identifies Stone Lud (Asset 47) as having potential to experience significant adverse effects from the Proposed Development, commenting that proximity and size of the turbines are significant factors and that mitigation may be possible by reducing the size of the turbines • States that in order to maintain the integrity of this asset's setting the "key characteristics (including key views) of the monument's setting must remain intact such that the cultural significance of the monument and the ability to understand, appreciate and experience it are not adversely affected"	• Turbine number reduced to two • Assessment of impact and effect contained in Section 10.4.2 Operational Effects • Figures 5-5-2, 5-3-2 and 10-20
	• Identifies additional Scheduled Monuments within vicinity for which long-ranging views/intervisibility with other monuments and natural features are possibly integral to setting, requests consideration and mitigation for significant effects • The listed assets comprise: o Halcro Manse broch (Asset 35) o Cairn of Heathercow (Asset 44) o Nipster henge (Asset 43) o Sordale Hill, Cnoc na Ciste cairn (Asset 27) o Ring Hillock cairn (Asset 46) o Earney Hillock (Asset 36)	• Consideration has been given to the potential setting effects upon these assets and the results of the assessment are set in and supported by the following: o Section 10.4.2 Operational Effects o Section 10.5.1 Proposed Mitigation/Monitoring o Technical Appendix 10-3 Setting Assessment o Figures 5-2-2, 5-3-2 and 10-13 to 10-20
HES, Scoping Report consultation response, Undated	• Reiterated request for photomontage for Stone Lud (Asset 47) • Advises of potential significant adverse effect on Stone Lud (Asset 47)	• Consideration of the potential setting effects on Stone Lud are set out in and supported by the following: o Section 10.4.2 Operational Effects o Figures 5-2-2, 5-3-2 and 10-20
THC, Scoping Response	• States that this advice is	• Technical Appendix 10-1

Consultee	Summary of Consultee Response	Where addressed within this Report
to Scoping Report for 4 turbine layout (Planning reference: 22/00790/SCOP), 28 March 2022	supplementary to the Pre-Application Advice given 3 November 2021 for Planning reference: 21/03943/PREMAJ • States the EIAR is required to identify all designated sites which may be directly or indirectly affected by the Proposed Development	Heritage Asset and Event Gazetteer
	• States that settings of the above assets should be considered and supported with appropriate visualisations	• Section 10.4.2 Operational Effects • Technical Appendix 10-3 Setting Assessment • Figures 5-2-2, 5-3-2 and 10-13 to 10-20
	• States that HES and THC Historic Environment Team (HET) yet to make comments regarding the Scoping Report and that in the absence of further response, the Pre-Application Advice (3 November 2021) should inform scope of EIAR, stating: o Several features identified within the Site boundary of cultural heritage interest; o Scheduled Monuments within vicinity should be carefully considered; and o EIAR should considered potential for direct and indirect impacts, supported with visualisations for the latter, and that appropriate mitigation proposals are recommended for unavoidable impacts	• Section 10.4.1 Construction Effects • Section 10.4.2 Operational Effects • Section 10.5.1 Proposed Mitigation/Monitoring • Technical Appendix 10-3 Setting Assessment
HET consultation response to a request submitted via email on 27 June 2023 confirmation and/or comments on proposed Cultural Heritage visualisations list, 27 June 2023	• HET confirmed they had no further comments regarding the visualisation proposals	• Figures 5-2-2, 5-3-2 and 10-13 to 10-20
HES, consultation response to a request submitted via email on 27 June 2023 confirmation and/or comments on proposed Cultural Heritage visualisations list , 26 July 2023	• Confirmed visual standards of Cultural Heritage visualisations should be prepared to an adequate standard acceptable to the determining authority • Confirmed proposed list of visualisations and visualisation types acceptable • Reiterated request for	• Figures 5-2-2, 5-3-2 and 10-13 to 10-20

Consultee	Summary of Consultee Response	Where addressed within this Report
	photomontage for Stone Lud (Asset 47)	

10.3.1 Assessment Methodology

Method of Baseline Characterisation

Four Study Areas were identified for this assessment:

- A core study area (the Proposed Development Site), which includes all land within the Proposed Development Site boundary, which was subject to assessment for potential direct effects (Figure 10-1). This Study Area was subject to a walkover survey and was used to identify cultural heritage assets which have the potential to be directly affected by the Proposed Development;
- A 1km Study Area for the identification of all known heritage assets and previous archaeological interventions (events) in order to help predict whether any similar hitherto unknown archaeological remains are likely to survive within the Proposed Development Site and thus be directly impacted by the Proposed Development (Figure 10-1);
- A 5km Study Area for the assessment of potential effects on the settings of all designated heritage assets including Scheduled Monuments, Listed Buildings, Inventoried Gardens and Designed Landscapes and Battlefields and Conservation Areas (Figure 10-2); and
- A 10km Study Area for the assessment of potential effects on the setting of all nationally important designated heritage assets including Scheduled Monuments, Category A Listed Buildings, Inventoried Gardens and Designed Landscapes and Battlefields (Figure 10-3).

Each heritage asset and event referred to in the text is listed in the Gazetteer in Technical Appendix 10-1. Each has been assigned an "Asset No." or "Event No." unique to this assessment, and the Gazetteer includes information regarding the type, period, grid reference, HER number, protective designation, and other descriptive information, as derived from the consulted sources.

The detailed setting assessment can be consulted in Technical Appendix 10-3 Setting Assessment, and photographic plates are available in Technical Appendix 10-2 Plates.

Desk Study

The following sources were consulted for the collation of the cultural heritage baseline data:

- The Highland Historic Environment Record (HER) for HER data, received 12 June 2023;
- Spatial data and descriptive information for designated assets held on HES's Data website, downloaded 9 June 2023;
- The National Record for the Historic Environment (NRHE) as held by HES for designated and non-designated heritage asset data, downloaded 9 June 2023;
- The National Map Library (National Library of Scotland (NLS)) for old Ordnance Survey (OS) maps (1st and 2nd edition, small and large scale) and pre-Ordnance Survey historical maps;

- The National Collection of Aerial Photography (NCAP) for historical aerial photography as detailed in Section 10.7 References;
- The Historic Land-Use Assessment Data for Scotland (HLAMap) for information on the historic land use character of the Site and the surrounding area, downloaded 9 June 2023;
- Google Earth and ESRI for historical and current aerial satellite imagery as detailed in Section 10.7 References; and
- The Scottish Remote Sensing Portal for any LiDAR data covering the Site;
- Scottish Palaeoecological Archive Database (SPAD) for information on sites with palaeoenvironmental and palaeoecological potential; and
- Various published bibliographic sources including historical descriptions of the area (such as Statistical Accounts), as detailed in Section 10.7 References.

Walkover Survey and Setting Assessments

An archaeological walkover survey of the Proposed Development Site was undertaken on 3 July 2023 with the aims of identifying any previously unknown archaeological remains and confirming the extent, condition and significance of previously recorded remains.

All known and accessible heritage assets were assessed in the field to establish their survival, extent, significance, and relationship to other assets.

All heritage assets encountered were recorded and photographed. The location of the features have been marked on plans, at a relevant scale, and keyed by means of Grid References to the OS mapping, using a GPS-enabled device and the Esri Field Maps application.

Site visits to designated assets within the defined Study Areas within the Zone of Theoretical Visibility (ZTV) were also made between 3-7 July 2023 to inform the setting assessment.

10.3.2 Significance Criteria

Assessment of Potential Effect Significance

The 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.

Criteria for Assessing Sensitivity of Heritage Assets

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*" (HES 2019).

Heritage assets also have value in the sense that they; "*...create spaces for recreation, leisure, tourism, and education, or places for nature to thrive*" and "*can be a source of identity, a resource for learning, or a spark for creativity*" (HES 2023, 10).

All heritage assets have significance; 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 2020b).

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 HES.

The rating of importance of heritage assets is first and foremost made in reference to their designation. For non-designated assets importance is assigned based on professional judgement and guided by the criteria presented in Table 10-2; which itself relates to the criteria for designations as set out in Designation Policy and Selection Guidance (HES 2020b) and Scotland's Listed Buildings (HES 2021).

Table 10-2: Criteria for Establishing Importance of Heritage Assets

Importance	Receptors
Very High	• World Heritage Sites (as protected by NPF4 (Scottish Government, 2023)); • Other designated or non-designated heritage assets with demonstrable Outstanding Universal Value.
High	• Scheduled Monuments (as protected by the Ancient Monuments and Archaeological Areas Act 1979 (the '1979 Act')); • Category A Listed Buildings (as protected by the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997) (the '1997 Act'); • Inventory Gardens and Designed Landscapes (as protected by the 1979 Act, as amended by the Historic Environment (Amendment) (Scotland) Act 2011 (the '2011 Act')); • Inventory Battlefields (as protected by the 1979 Act, as amended by the 2011 Act); • Outstanding examples of some period, style or type; • Non-designated assets and/or Locally Listed assets considered to meet the criteria for the designations as set out above (as protected by NPF4, Scottish Government 2023).
Medium	• Category B and C Listed Buildings (as protected by the 1997 Act); • Conservation Areas (as protected by the 1997 Act); • Major or representative examples of some period, style or type; or • Non-designated assets and/or Locally Listed assets considered to meet the criteria for the designations as set out above (as protected by NPF4, Scottish Government 2023).
Low	• Locally Listed assets; • Examples of any period, style or type which contribute to our understanding of the historic environment at the local level.
Negligible	• Relatively numerous types of features;

Importance	Receptors
	• Findspots of artefacts that have no definite archaeological remains known in their context; • The above non-designated features are protected by Policy 7o of NPF4 (Scottish Government 2023).

Determination of cultural heritage significance can be made with reference to the intrinsic, contextual and associative characteristics of an asset as set out in HEPS (HES 2019) and its accompanying Designation Policy and Selection Guidance (HES 2020b).

The Designation Policy and Selection Guidance indicates that the relationship of an asset to its setting or the landscape makes up part of its contextual characteristics (ibid).

HES's Managing Change Guidance, in defining what factors need to be considered in assessing the impact of a change on the setting of a historic asset or place, states that the magnitude of the proposed change should be considered; "*…relative to the sensitivity of the setting of an asset*" (HES 2020a, 11), thereby making clear that assets vary in their sensitivity to changes in setting and thus have a relative sensitivity.

The EIA Handbook suggests that cultural significance aligns with sensitivity but also states that; "*the relationship between value and sensitivity should be clearly articulated in the assessment*" (HES and SNH 2018, 184).

It is therefore recognised (ibid) 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 significance of an asset.

Thus, in determining the nature and level of effects upon assets and their settings by the development, the contribution that setting makes to an asset's significance and thus its sensitivity to changes to setting need to be considered.

This approach recognises the importance of avoiding significant adverse impacts on 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 appreciating some, but by no means all, assets.

Indeed, assets of High or Very High importance do not necessarily have high sensitivity to changes to their settings (e.g. do 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 an 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 it and its significance also has a bearing on the sensitivity of that asset to changes to its setting.

While heritage assets of High or Very High importance 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 significance.

HES's guidance on setting makes clear that the level of effect may relate to; "*…the ability of the setting* [of an asset] *to absorb new development without eroding its key characteristics*" (2020a, 11).

with Very High or High relative sensitivity to settings impacts may be vulnerable to any changes that affect their settings, and even slight changes may erode their key characteristics or the ability of their settings to contribute to the understanding, appreciation and experience of them.

Assets whose relative sensitivity to changes to their setting is lower may be able to accommodate greater changes to their settings without having key characteristics eroded.

The criteria used for establishing an asset's relative sensitivity to changes to its setting is detailed in Table 10-3. This table has been developed based on AOC Archaeology Group's professional judgement and experience in assessing setting effects.

It has been developed with reference to the policy and guidance noted above including NPF4 (Scottish Government 2023), HEPS (HES 2019) and its Designation Policy and Selection Guidance (HES 2020b), the Xi'an Declaration (ICOMOS 2005), the EIA Handbook (SNH & HES 2018), HES's guidance on the setting of heritage assets (HES 2020a).

Table 10-3: Criteria for Establishing Relative Sensitivity of a Heritage Asset to Changes to its Setting

Relative Sensitivity	Criteria
Very High	An asset, the setting of which is critical to an understanding, appreciation and experience of it, should be thought of as having Very High Sensitivity to changes to its setting. This is particularly relevant for assets whose settings, or elements thereof, make an essential direct contribution to their cultural significance.
High	An asset, the setting of which makes a major contribution to an 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 settings, or elements thereof, contribute substantially to their cultural significance.
Medium	An asset, the setting of which makes a moderate contribution to an 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 makes a contribution to significance but whereby its value is derived mainly from its other characteristics (see HES 2020a for discussion of intrinsic, contextual and associative characteristics which may contribute to overall cultural significance).
Low	An asset, the setting of which makes some contribution to an 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 predominantly derived from its other characteristics (see HES 2020a for discussion of intrinsic, contextual and associative characteristics which may contribute to overall cultural significance).
Negligible	An asset whose setting makes minimal contribution to an understanding, appreciation and experience of it should generally be thought of as having Negligible Sensitivity to changes to its setting.

The determination of a heritage asset's relative sensitivity to changes to its setting is first and foremost reliant upon the determination of its setting and the key characteristics of setting which contribute to its cultural significance and an understanding and appreciation of that cultural significance. This aligns with Stage 2 of the HES guidance on setting (2020a, 9).

The criteria set out in Table 10-3 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 of the assets. This allows for the use of professional judgement and each asset is assessed on an individual basis.

Criteria for Assessing Magnitude of Impact

Potential impacts, that is the physical change to known heritage assets, and unknown buried archaeological remains, or changes to their settings, in the case of the Proposed Development relate to the possibility of disturbing, removing or destroying in situ remains and artefacts during the construction phase or the placement of new features within their setting during the operational phase.

The EIA Handbook notes that: "*In the context of cultural heritage impact assessment, the receptors are the heritage assets and impacts will be considered in terms of the change in their cultural significance*" (SNH & HES 2018, 181). Direct changes to assets during the construction phase will relate to the physical removal or damage (in part or whole) to a heritage asset and will therefore likely be adverse.

However, the EIA Handbook states that: "*When considering setting impacts, visual change should not be equated directly with adverse impact. Rather the impact should be assessed with reference to the degree that the proposal affects those aspects of setting that contribute to the asset's cultural significance*" (ibid).

It further indicates that magnitude of impact should largely be regarded in the context of impacts to "*elements of the fabric or setting of the heritage asset that contribute to its cultural significance*" (ibid, 184).

On this basis, the magnitude of the impacts upon heritage assets caused by the Proposed Development is rated using the classifications and criteria outlined in Table 10-4. These criteria consider the extent of change which could be anticipated as a result of the Proposed Development in the context of the significance of the asset, including any contribution made by setting.

Table 10-4: Criteria for Classifying Magnitude of Change

Magnitude of Change	Criteria
High	• Substantial loss of information content resulting from total or large-scale removal of deposits from an asset to the extent that it would result in a substantial loss of cultural significance; • Major alteration of an asset's baseline setting, which materially compromises the ability to understand, appreciate and experience the contribution that setting makes to the significance of the asset and erodes the key characteristics (HES 2020a) of the setting to the extent that it would result in substantial loss of cultural significance.
Medium	• Loss of information content resulting from material alteration of the baseline conditions by removal of part of an asset that would lead to some loss of cultural significance; • Alteration of an asset's baseline setting that affects the ability to understand, appreciate and experience the contribution that setting makes to the significance of the asset to a degree but whereby the cultural significance of the monument in its current setting remains legible. The key characteristics of the setting (HES 2020a) are not eroded; there would, however, be some loss of cultural significance.
Low	• Detectable impacts leading to minor alteration to baseline conditions by removal of a small proportion of the asset, which would lead to

Magnitude of Change	Criteria
	slight loss of cultural significance; • Alterations to the asset's baseline setting, which do not affect the ability to understand, appreciate and experience the contribution that setting makes to the asset's overall significance and would only lead to slight loss of cultural significance.
Negligible	• Loss of a small percentage of the area of an asset's peripheral deposits/fabric that would leave cultural significance unchanged; • A reversible alteration to the fabric of the asset; • A marginal alteration to the asset's baseline setting that would leave cultural significance of the asset unchanged.
None	• No impact predicted.

In line with HES guidance on setting (2020a) factors which will be considered in coming to a judgement regarding magnitude of impact upon setting will include, but not be limited to:

- "*whether key views to or from the historic asset or place are interrupted;*
- *whether the proposed change would dominate or detract in a way that affects our ability to understand and appreciate the historic asset;*
- *the visual impact of the proposed change relative to the scale of the historic asset or place and its setting;*
- *the visual impact of the proposed change relative to the current place of the historic asset in the landscape;*
- *the presence, extent, character and scale of the existing built environment within the surroundings of the historic asset or place and how the proposed development compares to this;*
- *the magnitude of the proposed change relative to the sensitivity of the setting of an asset;*
- *sometimes relatively small changes, or a series of small changes, can have a major impact on our ability to appreciate and understand a historic asset or place. Points to consider include:*
  - *the ability of the setting to absorb new development without eroding its key characteristics;*
  - *the effect of the proposed change on qualities of the existing setting such as sense of remoteness, current noise levels, evocation of the historical past, sense of place, cultural identity, associated spiritual responses; and*
  - *cumulative impacts: individual developments may not cause significant impacts on their own, but may do so when they are combined*" (ibid; 10-11).

Criteria for Assessing Significance

The level of effect is judged to be the interaction of the asset's importance or relative sensitivity (Tables 10-2 and 10-3) and the magnitude of the impact (Table 10-4).

In order to provide a level of consistency, the assessment of importance and relative sensitivity, the prediction of magnitude of impact and the assessment of level of effect will be guided by pre-defined criteria.

The predicted level of effect on each heritage asset is then determined by considering the asset's importance and/or relative sensitivity in conjunction with the predicted

magnitude of the impact. The method of deriving the level of effect is provided in Table 10-5.

Table 10-5: Significance of Effect based on Inter-Relationship between the Importance and/or Sensitivity of a Heritage Asset and/or its Setting and the Magnitude of Impact

Magnitude of Impact	Importance and/or Relative Sensitivity to Changes to Setting				
	Negligible	Low	Medium	High	Very High
High	Minor	**Moderate**	**Moderate**	**Major**	**Major**
Medium	Negligible/ Neutral	Minor	**Moderate**	**Moderate**	**Major**
Low	Negligible/ Neutral	Negligible/ Neutral	Minor	Minor	**Moderate**
Negligible	Negligible/ Neutral	Negligible/ Neutral	Negligible/ Neutral	Minor	Minor

Whilst the tables are used to ensure a consistent approach, it is noted that the EIA Handbook states that where matrices; "*…are used, care must be taken to ensure that they are not applied in a mechanistic fashion or in a way that obscures the reasoning behind the assessment*" (SNH & HES 2018, 185).

The EIA Handbook further states that: "*Generally, a narrative approach will allow the assessor to set out their reasoning more clearly than a tabulated approach*" (ibid, 184). As such a qualitative descriptive narrative is provided for each asset to summarise and explain each of the professional value judgements that have been made in establishing sensitivity and magnitude of impact for each individual asset.

Where a neutral level of effect is indicated in the table above this primarily relates to potential setting effects where the Proposed Development would be perceptible, and thus result in a change to the baseline setting, but whereby the Proposed Development would not result in an adverse effect on the setting of the asset.

This is in line with page 181 of the EIA Handbook (SNH & HES 2018), quoted above, which indicates that visual changes should not necessarily be considered to have an adverse impact upon setting.

Using professional judgment and with reference to the Guidelines for Environmental Impact Assessment (as updated) (IEMA 2017), and the EIA Handbook (SNH & HES 2018) the assessment considers moderate and greater effects to be significant (bold in Table 10.5), while minor and lesser effects are considered not significant.

Integrity of Setting

NPF4 indicates that development proposals affecting Scheduled Monuments will only be supported where; "*…significant adverse impacts on the integrity of setting of a scheduled monument are avoided*" (Scottish Government 2023, Policy 7h(ii), 46).

Significant adverse impacts on integrity of setting are judged here to relate to whether a change would adversely affect the asset's key attributes or elements of setting which contribute to an asset's significance.

It is considered that a significant impact upon the integrity of the setting of an asset will only occur where the degree of change that will be represented by the Proposed Development would adversely alter those factors of the monument's setting that contribute to cultural significance such that the understanding, appreciation and

experience of an asset are not adequately retained. In terms of effects upon the setting of heritage assets.

It is considered that only those effects identified as 'significant' in EIA terms will have the potential to significantly adversely impact upon integrity of setting. Where no EIA significant effect is found it is considered that there would be no significant impact upon the integrity of an asset's setting.

This is because for many assets, setting may make a limited contribution to their significance and as such changes would not significantly impact the integrity of their settings. Additionally, as set out in Table 10-3, lower ratings of magnitude of change relate to changes that would not obscure or erode key characteristics of setting.

Where EIA significant effects are found, a detailed assessment of adverse impacts upon integrity of setting is made. Whilst non-significant effects are unlikely to significantly impact integrity of setting, the reverse is not always true.

That is, the assessment of an effect as being 'significant' in EIA does not necessarily mean that the adverse effect to the asset's setting will significantly impact its integrity.

The assessment of adverse impact upon the integrity of an asset's setting, where required, is a qualitative one, and largely depends upon whether the impact predicted would result in a major impediment to the ability to understand or appreciate the heritage asset.

Assessment of Cumulative Effect Significance

It is necessary to consider the effects arising from the addition of the Proposed Development to other cumulative developments. Consideration has been given to whether this would result in an additional cumulative change upon heritage assets, beyond the levels predicted for the Proposed Development alone.

The cumulative assessment has regard to the guidance on cumulative effects upon heritage assets as set out in Environmental Impact Assessment Handbook V5 (HES & SNH 2018) and utilises the criteria used in determining effects from the Proposed Development as outlined in Tables 10-2 to 10-5 above.

The assessment of cumulative effects considers 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.

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

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 cumulative developments;
- The interrelationship between their ZTVs (i.e. theoretical visibility);
- The overall character of the asset and its sensitivity;
- The siting, scale and design of the cumulative developments themselves;
- The way in which the asset is experienced;

- The placing of the cumulative development(s) in relation to both the Proposed Development 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.

The cumulative assessment is based upon a list of operational, under construction or consented developments, along with developments where planning permission has been applied for and where scoping has been carried out. Cumulative developments are indicated on Figure 1-3.

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 NatureScot places on significant effects, and the requirements of the EIA Regulations, cumulative effects have been considered in detail for those assets which were identified by consultees and those where a potential significant effect from the Proposed Development alone has been identified.

Where No Impact has been predicted for the Proposed Development, there will be no cumulative effect.

Requirements for Mitigation

National and local planning policies and planning guidance outlined in Section 10.2.1 of this chapter require a mitigation response that is designed to 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 policies and guidance express a general presumption in favour of preserving heritage remains in situ [wherever possible]. Their "*preservation by record*" (i.e. through excavation and recording, followed by analysis and publication by qualified archaeologists) is a less desirable alternative.

NPF4 notes that the policy intent is for the protection and enhancement of historic environment assets (Scottish Government 2023, 45). Policies related to designated assets (Policies 7a to 7j and 7l) prefer avoidance of impact and where this is not possible require that any impacts are minimised.

Policy 7o, relating to non-designated assets, states that these assets and their settings;

> "…*should be protected and preserved in situ wherever feasible … Where impacts cannot be avoided they should be minimised. Where it has been demonstrated that avoidance or retention is not possible, excavation, recording, analysis, archiving, publication and activities to provide public benefit may be required through the use of conditions or legal/planning obligations*" (ibid, 46-47).

Assessment of Residual Effect Significance

The residual effect is what remains following the application of mitigation and management measures. The level of residual effect is defined using criteria outlined in Tables 10-2 to 10-5. No direct mitigation is possible for setting effects (beyond embedded mitigation by design) and therefore residual operational phase effects on the setting of heritage assets would be the same as potential (pre-mitigation) effects.

Limitations of Assessment

This assessment is based upon data obtained from publicly accessible archives as described in the data sources as part of the Desk Study. NRHE data and HES Designation data was downloaded on 9 June 2023 and is current to this date. HER data was obtained from the Highland HER on 12 June 2023 and is current to this date. This assessment does not include any records added or altered after this date.

No intrusive archaeological evaluation has been undertaken to inform this assessment, and as such there is the potential for hitherto unknown archaeological remains to survive within the Proposed Development Site.

Such remains would have the potential to be impacted by any ground-breaking works associated with the construction of the Proposed Development. This limitation is taken into account in Section 10.5.1 of this chapter: Proposed Mitigation/Monitoring, where measures to avoid or minimise any such effects on hitherto unknown remains are provided for.

10.4 Baseline Conditions

10.4.1 Designations

There are no World Heritage Sites, Conservations Areas, Inventory Garden and Designed Landscapes or Inventory Battlefields within the Proposed Development Site or the defined Study Areas.

Designations: The Proposed Development Site and 1km Study Area

There are no designated heritage assets within the Proposed Development Site or the surrounding 1km Study Area.

Designations: The 5km Study Area

Within 1km-5km of the Proposed Development Site there are 17 Scheduled Monuments (Assets 9, 15, 27-29, 32-36, 38, 43, 44, 46, 47, 51 and 53), eight Category B Listed Buildings (Assets 56-63) and four Category C Listed Buildings (Assets 64-67) (Figure 10-2).

The Scheduled Monuments include: prehistoric burial cairns (Assets 9, 27-29, 32, 33, 36, 44, 46, 53), a prehistoric standing stone, recumbent stone and cairn (Asset 47), a henge (Asset 43), four brochs (Assets 15, 34, 35, and 38) and a post-medieval church (Asset 51).

The Category B Listed Buildings comprise a post-medieval church (Asset 56), houses (Assets 57, 59 and 61), gate lodges (Assets 60 and 63), a building (Asset 62) and a mill (Asset 58). The Category C Listed Buildings comprise a post-medieval house (Asset 65), a dovecot and memorial (Asset 64), an ice house (Asset 66) and a drill hall (Asset 67).

Designations: The 10km Study Area

Within 5km-10km of the Proposed Development Site there are 36 Scheduled Monuments (Assets 1-8, 10-14, 16-26, 30, 31, 37, 39-42, 45, 48-50 and 52) and two Category A Listed Buildings (Assets 54 and 55) (Figure 10-3).

The Scheduled Monuments comprise prehistoric burial cairns (Assets 4, 5, 7, 10, 11, 14, 16, 17, 19, 22, 24 and 48), brochs (Assets 8, 12, 18, 20, 21, 23, 26, 30, 31, 37, 39-41, 45 and 49), a hut circle (Asset 6), medieval and post-medieval ecclesiastical sites (Assets 2, 3,

42 and 52), a medieval fort (Asset 13) and a medieval castle (Asset 25). The Category A Listed Buildings comprise a medieval church (Asset 54) and a post-medieval mill (Asset 55).

10.4.2 Archaeological and Historical Background

Prehistoric (8000 BC – AD 410)

There are no prehistoric remains recorded within the Proposed Development Site. One non-designated heritage asset of possible prehistoric date, the Fairy Hillock (Asset 68), tentatively described as a possible cairn, is situated c. 0.8km to the northwest of the Proposed Development Site at Ha' of Durran.

The closest definitively prehistoric asset is the Scheduled Stone Lud (Asset 47), located c. 1.1km southeast of the Proposed Development Site and comprising a standing stone, recumbent stone and cairn, considered to be of Late Neolithic or Early Bronze Age date.

Within 1km-5km of the Proposed Development Site are various Scheduled burial cairns of mostly Neolithic date (Assets 9, 27-29, 32, 33, 36, 44, 46 and 53), with many showing evidence of later Bronze Age interactions, particularly amongst the cairns recorded on the hills of Sordale and Stemster to the west of the Proposed Development Site.

The remnants of a Scheduled henge (Asset 43) have been recorded on a broad spur overlooking Loch Watten to the south, and four Scheduled brochs (Assets 15, 34, 35, and 38) are also recorded. The nearest of these to the Proposed Development Site is Halcro broch (Asset 35), situated 2.7km to the southeast.

Within 5km-10km of the Proposed Development there are a further 12 prehistoric burial cairns (Assets 4, 5, 7, 10, 11, 14, 16, 17, 19, 22, 24 and 48), 13 brochs (Assets 8, 12, 18, 20, 21, 23, 26, 30, 31, 37, 39-41, 45 and 49) and one hut circle (Asset 6).

Many of the funerary monuments in the surrounding Study Areas occupy prominent hilltops or ridgelines, most notably Stemster long cairn (Asset 9), Cnoc na Ciste cairn (Asset 27), the Gallow Hill long cairns and chambered cairn (Asset 28), the Cairn of Heathercow (Asset 44), Earney Hillock cairn (Asset 36), Ring Hillock cairn (Asset 46), Earl's Cairn (Asset 16) and Gallow Hillock cairn (Asset 10).

Prehistoric remains are poorly represented within the immediate vicinity of the Proposed Development Site, however this is likely due to a lack of intrusive archaeological events that could inform the cultural heritage baseline with regards to sub-surface archaeological remains, and not a true reflection of the scale of prehistoric activity in the area.

Based on the extensive prehistoric remains further afield, the favourable topography of the Proposed Development Site – in particular the well-defined low-lying hill below its eastern extent – and the relatively undeveloped nature of the Proposed Development Site, there is considered to be a Low to Medium potential for prehistoric remains to survive at sub-surface level.

Early Historic and Medieval (AD 410 – 1600)

There are no early historic or medieval assets recorded within the Proposed Development Site or 1km Study Area.

Just over 1km to the northwest is the location of an old kirk (Asset 86), since removed, which local tradition alleges to be the site of a pre-reformation church.

Within 5km-10km of the Proposed Development Site there are a six early historic and/or medieval designated assets recorded. These comprise three ecclesiastical sites (the Scheduled St Thomas's Chapel (Asset 42) and Kirk o' Moss ecclesiastic settlement (Asset 52), and the Category A Listed Dunnet Parish Church (Asset 54)) and two fortified sites (the Scheduled Ring of Castlehill (Asset 13) and Braal Castle (Asset 25)).

There is judged to be a Low potential for early historic and medieval remains to survive within the Proposed Development Site based on current evidence, however, similar to the assessment for prehistoric remains, the lack of intrusive investigation in the wider area means that this evidence is limited to upstanding remains.

Post-medieval (AD 1600 – 1900)

One previously recorded asset, the non-designated farmstead of Swarclett (Asset 70), has been recorded within the Proposed Development Site. This assessment has identified a further ten non-designated assets within the Proposed Development Site (Assets 96, 103, 105, 106 and 108-113), comprising field boundaries, clearance cairns and a quarry. These are detailed further in Section 10.3.4 Walkover Survey.

In the Register of the Great Seal of Scotland, King James I is recorded in 1616 as granting much of the lands of Caithness, including *Scoricleit* [Swarclett] to "*Joanni Murray de Trioun mercatori burgensi de Edinburgh*", John Murray de Trioun, a merchant burgess of Edinburgh (Thomson 1892, 544-545).

The Historical Land Use Map (HLAMap 2023) describes the Proposed Development Site as comprising "*rectilinear fields and farms*" from the 17th to 18th centuries.

Early historical maps tend to be schematic and lacking in detail, however they can be informative with regard to place names and general land use. *Deeren* [Durran] and Hoy are identified as small settlements near an un-named loch on Gordon's 1642 map of Caithness (Figure 10-4), which had been based on an earlier (since lost) map by Pont produced in the late 16th or early 17th century.

Blaeu's map of 1654 (not illustrated), itself based on Gordon's map, identifies the loch as Loch *Deeran* [Durran]. Corsback is identified as a named place on these maps, but this likely refers to a settlement near the north coast and not the Corsback Hill south of the Proposed Development Site.

In 1702, the land tax rolls for Caithness identify the Laird of Murkle as the proprietor of Swarclett (Scotlands Places 2023a). A descendent, Sir John Gordon Sinclair of Murkle, is identified as the proprietor of Swarclett in 1802 (Scotlands Places 2023b).

Roy's military map of 1747-1755 (Figure 10-5) depicts slightly more detail of the general area. *Swarclet* [Swarclett] is identified as a settlement for the first time, set between two un-named watercourses, of which the western one is certainly the Burn of Durran running north into the labelled *Loch Derain* [Durran]. It is possible that some of the extant Swarclett remains (Asset 70) are those depicted.

Hoy is identified as a settlement north of Swarclett, and *Bourtour* [Bowertower] is labelled to the east. The land surrounding the two watercourses is depicted as cultivated and the road to Thurso is identified to the west, leading past *Tester* [Tister] to the southwest of Swarclett.

The Old Statistical Account (OSA) for Olrig (Mackenzie 1794) provides detail about the parish of Olrig in which the Proposed Development Site is situated, and while Swarclett is not named, the OSA does refer to Loch Durran and the agricultural potential of land reclamation through its draining:

> *"It is much to be regretted, that greater exertions are not made for the draining of these marches; for, independent of the influence of such operations in meliorating the air and climate, and thereby consulting the health of the people, the marl to be found in them for the purpose of agriculture, would amply compensate the expense of the work. The loch of Duran, in particular, calls for an exertion of this sort; it is the only one in the parish, and is nearly 3 miles in circumference; a part of it was drained some years ago, by a former proprietor, and bog-hay, as it is called, now grows in great abundance, where pool and putrefaction heretofore prevailed. The outlet to the sea is of easy operation; and by continued exertions, it is not to be doubted but this expanse of water might, in a few years, be reduced to a small rivulet, and the soil it now occupies rendered as productive as any part of the parish."* (Mackenzie 1794, 157).

Efforts to drain Loch Duran evidently occurred soon after the production of the OSA. The New Statistical Account (NSA) states that:

> "*The only lake, that of Durran, mentioned in the former Statistical Account, was drained many years ago, and has amply rewarded the proprietors, the surface of water now being exchanged for inexhaustible pits of marl and rich meadow pasture*." (Mackenzie 1840, 61).

The topography and geography of the area suggests that the loch was situated within the basin immediately north of the Proposed Development Site, where marshy ground and a small pool of water still visible between Borgie Mains and Wester Olrig today.

The large drainage ditch (Asset 111) identified during the walkover survey that runs at the low point of the Proposed Development Site, bisecting it north to south, channels the augmented remnants of the Burn of Durran that would have fed this loch.

This drain and the others within the Proposed Development Site (Assets 108 and 110), and those visible in the surrounding area, are evidence of the extensive land reclamation works carried out during the post-medieval improvement period.

The NSA furthermore describes in detail general land improvements to the parish through both extensive drainage works and crop-rotation (ibid, 64). Of specific mention is the practice of "furrow draining" which is predicted to be commonplace practice in the future (ibid).

Linear features visible in aerial photography and satellite imagery of the Proposed Development Site may be remnants of such furrows and drainage practices.

With regard to antiquities, the OSA states that: "*Picts Houses are frequent in different parts of the parish; their number may amount to 6 or 7. On the top of the hill of Olrick, there are evident vestiges of a watch-tower.*" (Mackenzie 1794, 163). This latter is likely a reference to the now Scheduled broch (Asset 38).

The NSA also makes mention of "*Pictish Houses*" in the parish (ibid, 61). Of more particular reference to the Proposed Development Site, the NSA records that some of the non-residing heritors [proprietors] are "*...the Trustees of the late George Miller, Esq.,*

who bequeathed the small property of Swarclet [sic] *for the benefit of the poor of the parish of Thurso*." (ibid 62).

Thomson and Johnson's map of 1822 (not illustrated) depict *Duran* [Durran] at the base of a southeast facing slope of Duran Hill. Loch Durran is shown as a linear loch, extending northwards from the northeast side of Duran Hill. Also depicted on the map is Stone Lud (Asset 47).

The 1873 OS maps (Figure 10-6) are the first to show the Proposed Development Site in accurate detail. The north extent and some of the northeast extent are shown as unimproved marshy ground, while the remainder of the area comprises several improved fields.

In the central portion of the Proposed Development Site is depicted a small settlement identified as Swarclett (Asset 70). This comprises two roofed buildings (Assets 70c and 70d) set amongst a number of small pens and a benchmark, and a larger square enclosure (Asset 70a) to the southeast.

Immediately outwith the Proposed Development Site boundary to the southeast is another roofed building (Asset 70e), included within this asset due to its proximity. The quarry (Asset 96) is visible at the southwest corner of the square enclosure. The OS Book of Reference identifies the land parcels across which the Proposed Development Site as per Table 10-6 (OS 1873, 8-14).

Table 10-6: Land Parcel Numbers and Land Useage per the OS Book of Reference (OS 1873)

Land Parcel No.	Remarks
765	Arable etc.
1294	Rough pasture
1295	Rough pasture
1296	Pasture
1297	Pasture
1298	Houses, gardens, etc.
1306	Pasture
1307	Pasture
1309	Pasture

Swarclett is identified in the 1871-1873 OS Name Book: "*This name applies to what was once a farm-steading now only a dwelling house situated about half a mile South of Hoy. The property of the Poor of Thurso*." (OS 1871-1873, 86).

The 1873 OS map (Figure 10-6) shows the name Swarclett southwest of the then-in-use Asset 70c, and presumably this is the building described in the Name Book, however it is not wholly apparent whether the building described as having been gifted to the poor of Thurso is Asset 70c, within the Proposed Development Site boundary, or Asset 70e, the building outwith the Proposed Development Site boundary.

Further post-medieval assets within the Proposed Development Site include drainage ditches and field boundaries, Assets 70b, 106, 108, 110, 111 and 112, consistent with the 1873 OS mapping. Two clearance cairns (Assets 103 and 113) identified during the desk study and walkover survey may also be post-medieval in date.

Within 1km of the Proposed Development Site, the majority of the recorded heritage assets comprise settlement and agricultural remains of post-medieval date and include farmsteads and buildings (Assets 78-80, 82-85, 88, 89, 91 and 98), sheep folds, enclosures and field boundaries (Assets 81, 87, 90, 92, 97 and 102), quarries (Assets 99 and 100), and field clearance (Asset 101).

Within 1km-5km of the Proposed Development Site are recorded 13 post-medieval heritage assets. These comprise:

- The mid-17th century Scheduled St Trothan's Church (Asset 51);
- The late 17th century Category C Listed Stemster dove cot (Asset 64);
- The mid-18th century Category B Listed Mains of Olrig house (Asset 61);
- The 19th century Category B Listed Bower Parish Church and Manse (Asset 56);
- Stemster House (Asset 57);
- Castletown mill (Asset 58);
- Olrig gate house and gate lodge (Assets 60 and 63);
- Old Reading Room (Asset 62), and
- The Category C Listed Borgie House (Asset 65), Castletown ice house (Asset 66) and drill hall (Asset 67).

Within 5km-10km of the Proposed Development Site are recorded a further four post-medieval assets, comprising three Scheduled Monuments: the early post-Reformation Dunn chapel (Asset 2), the 19th century Castlehill windmill (Asset 1), the 19th century coastal Castletown battery (Asset 50); and the 19th century Category A Listed Achingale mill.

There is considered to be a High potential for further remains of post-medieval date to survive within the Proposed Development Site. Such remains would likely relate to settlement and agricultural activity and range in importance from Negligible to Low.

Modern (AD 1900 onwards)

No modern remains had previously been recorded within the Proposed Development Site or within the surrounding Study Areas. This assessment identified three non-designated modern assets within the Proposed Development Site comprising an agricultural building (Asset 104), clearance cairn (Asset 105) and a spoil heap (Asset 107).

By the time of the 1906 OS map (Figure 10-7), the building Asset 70c was no longer in use and it is depicted as roofless along the north edge of the square enclosure (Asset 70a). The north building (Asset 70d) is not depicted at all by this time, nor are the myriad of small pens to the west of the buildings that were previously depicted on the 1873 map (Figure 10-6).

The building (Asset 70e) to the southeast of the Proposed Development Site is depicted as still in use. The quarry (Asset 96) had expanded slightly to the southwest, and apart from an additional field boundary depicted in the southwest-most field, no further alterations are evident.

This layout remains unchanged until 1968 (Figure 10-8), when the additional field boundary is removed and a roof appears to have been replaced on the building at Asset 70c, which is shown as being in-use once more.

This is not long-lived however, as the 1970 OS map (Figure 10-9) does not depict the building at all, suggesting it may have been roofed for a non-residential purpose, such as a temporary animal shelter etc.

Aerial imagery evidence is discussed in detail in Section 10.3.3. However, examination of aerial photography indicates that between 1970 and 1988, the agricultural building (Asset 104) was constructed on the Proposed Development Site, with an associated access track leading west to the road.

The roof for this building had been removed by 2016. The building (Asset 70e) southeast of the Proposed Development Site appears to still be roofed in the 1988 photograph, but the track to it appears dis-used. It is no longer roofed by 2003.

Between 2003 and 2016, satellite imagery shows the construction of an access track leading northeast out of the Proposed Development Site to a small constructed pond. A large spoil heap (Asset 107) associated with these works is observable on this imagery and was viewed during the walkover survey.

Overall, the Proposed Development Site has experienced relatively little change through the 20th and early 21st centuries, with alterations limited to the construction of access tracks, a building, and the decline in use of the Swarclett (Asset 70) buildings. There is considered to be a Low potential for further hitherto unknown remains of modern date within the Proposed Development Site.

Undated Evidence

There are no recorded remains of unknown date within the Proposed Development Site.

Five non-designated heritage assets (Assets 68, 74-77) of unknown date are recorded within the surrounding 1km Study Area. These are described as:

- A cairn (Asset 68), located c. 850m northwest of the Proposed Development Site;
- A possible broch (Asset 75) and hut circle or mound (Asset 76), located close together c. 650m northeast of the Proposed Development Site;
- another possible broch (Asset 74) located c. 320m northwest of the Proposed Development Site; and
- A possible mound (Asset 77) located c. 75m west of the Proposed Development Site.

These assets are described as turf-covered mounds but have not been intrusively investigated to definitively prove their monument type, character or date, however it is plausible that they may all be prehistoric monuments considering the propensity for such remains in the wider area.

Previous Archaeological Events

Two previous archaeological events (Events 94 and 95) have been recorded within the 1km Study Area. Event 95, the extent for which is recorded by the Highland HER as extending west from the existing Proposed Development Site, in actuality covers the northern part of the Proposed Development Site and comprised an Environmental Statement from 2016 in support of a single turbine wind farm, Hoy Wind Farm.

This Environmental Statement includes some basic heritage information regarding previously recorded heritage assets within the local area, all of which have been

included within Technical Appendix 10-1 Heritage Asset and Event Gazetteer and discussed above where relevant.

Event 94 comprised a walkover survey and desk-based for an Environmental Statement from 2015 to support a planning application for the installation of a 32kV overhead line (OHL).

The survey area for this passed to the north of the Proposed Development Site and, for the segment within the 1km Study Area, a number of non-designated features (Assets 97-102) were recorded that, while not yet included within the Highland HER, have been included within Technical Appendix 10-1 Heritage Asset and Event Gazetteer and are discussed above where relevant.

10.4.3 Aerial Imagery

10.4.4 Aerial Photographs

A search of aerial photographs held by HES's National Collection of Aerial Photography (NCAP) was undertaken on 30 June 2023. A full list of the photographs consulted is detailed in Section 10.7.

Photographs dating to 1941 show the Proposed Development Site much as depicted on the 1873 and 1906 OS maps (Figures 10-6 and 10-7), with the grid-pattern of field drains visible demarcating each improved field to the west of Swarclett (Asset 70) visible. The fields are generally improved, with some rough ground visible along the northeast section, southeast section, and part of the south central area.

The square drystone wall enclosure (Asset 70a) appears intact and the remnants of the two rectangular buildings (Assets 70c and 70d) to the north are just visible. The quarry (Asset 96) to the southwest is also visible, as is the probable clearance cairn (Asset 113) in the southwest portion of the Proposed Development Site.

Wavy linear features are visible across the Proposed Development Site, likely remnants of furrow drainage as described in the NSA (Mackenzie 1840, 64), with both north/south and east/west aligned furrows visible.

Photography from 1988 shows the agricultural building (Asset 104) had been erected in the north portion of the Proposed Development Site, with a track leading to it from the road to the west.

No other variations to the Proposed Development Site itself are visible, but a belt of commercial forestry plantation abutting the south of the Proposed Development Site is shown that is not depicted on the 1970 OS map (Figure 10-9).

It appears that the building immediately outwith the Proposed Development Site (Asset 70e to the southeast) is still roofed, however access roads to it do not appear to be visible suggesting the building was no longer in residential use.

Satellite Imagery

Current and historical satellite imagery was viewed using the Google Pro (Desktop) application and Esri's World Imagery Service (Wayback). A full list of the imagery consulted is detailed in Section 10.7.

In 2003, the field boundaries within the Proposed Development Site appear consistent with those shown on the 1988 aerial photographs and 1970 OS map (Figure 10-9). The

fields appear to be a mixture of pastoral and arable with rough ground along the northeast, southeast and south central area visible.

The agricultural building (Asset 104) is roofed, and the access track extends past it along the course it runs in the present day. The clearance cairn (Asset 103) is visible. The building (Asset 70e) southeast of the Proposed Development Site boundary is no longer roofed.

By 2016 it appears that the eastern side of the drystone wall enclosure (Asset 70a) had been removed. The spoil heap (Asset 107) is visible, under vegetation, alongside the track that leads northeast to a pond outwith the Proposed Development Site.

Most of the forestry to the south of the Proposed Development Site has been felled by this time but for the still-extant stand at the northeast end of the former plantation. The roof of the agricultural building (Asset 104) had also been removed by 2016. Subsequent imagery shows no further variations to the Proposed Development Site.

LiDAR Data

The Scottish Remote Sensing Portal was checked for publicly available LiDAR data covering the Proposed Development Site. No such data was available.

10.4.5 Walkover Survey

A walkover survey of the Proposed Development Site was carried out on 3 July 2023. Plates accompanying this section can be viewed in Technical Appendix 10-2. The weather during the survey was overcast and dry with excellent visibility.

Some sections of the Proposed Development Site could not be accessed directly due to cattle or mature cereal crop, however these areas could be viewed from afar. The extents of surveyed non-designated heritage assets are depicted on Figure 10-10. The central eastern portion of the Proposed Development Site, around Asset 70 and the elements that make this up, was under tall grass which limited visibility.

Topographically, much of the Proposed Development Site is situated on a gentle west-facing hill slope that forms the opposing side of the former stream or river valley that would have fed the now drained Loch Durran (Plate 10-2-1). The drainage ditch (Asset 111) likely forms the augmented remains of this old watercourse.

The southwest portion of the Proposed Development Site is situated on the lower slope of the east-facing valley side, where Durran Mains (Asset 82) is situated.

The Proposed Development Site lies predominantly over pastoral and arable fields and at the time of the survey was in use either as cattle pasture or under mature cereal crop. Rougher pasture and unimproved ground lie along the north, northeast and south periphery of the Proposed Development Site.

A dirt vehicle track extends partially across the Proposed Development Site from the road to the west (Plate 10-2-2). This track is proposed for upgrade for use during construction works. A clearance cairn (Asset 103; Plate 10-2-3) of post-medieval or modern date was observed directly adjacent to the Proposed Development Site Boundary.

The remnants of a modern agricultural building (Asset 104; Plate 10-2-4), now roofless and in use as a storage and laydown area, stands further east along the existing track, with a small nearby clearance cairn (Asset 105; Plate 10-2-5), likely also of modern date,

present under tall vegetation to the south. The existing track then diverts to the northeast alongside a post-medieval drainage ditch (Asset 106; Plate 10-2-6), consistent with a field boundary depicted on the 1873 OS map, before turning southwest.

Close to the location for Turbine 1 is a large vegetation-covered spoil heap (Asset 107; Plate 10-2-7) associated with the construction of a track and pond, the latter of which lies beyond the Proposed Development Site boundary to the northeast. The location for Turbine 1 is on the existing track (Plate 10-2-8) and almost on the crest of the hill the Proposed Development Site occupies.

From ground level, this location offers extensive views from the south to the northwest, overlooking the broad valley the Proposed Development Site is situated across, showing a typical northeast Caithness landscape comprising a patchwork of gently undulating fields, interspersed with farmsteads and dwellings, with some moorland and stands of commercial forestry plantations.

Turbines of the Achlachan, Halsary, Bad a' Cheo and Causeymire wind farms were visible in views to the southwest. The Scheduled Stemster long cairn (Asset 9; c. 3.8km from Turbine 2) was visible as a small mound breaking the skyline atop Stemster Hill, framed (and overshadowed) by the larger modern mounded water reservoir to the south and a stand of commercial forestry plantation to the northeast (Plate 10-2-9).

This asset, and Stone Lud (Asset 47), were the only two designated assets which could be discerned from ground level from the Proposed Development Site. Views to the north and northeast are somewhat screened by tall vegetation and the spoil heap (Asset 107), with the four Lochend wind turbines visible from hub height beyond an eastern ridgeline.

Earney Hillock chambered cairn (Asset 36; c. 2.6km northeast) could not be discerned, screened by intervening vegetation.

Views to the east and southeast are screened by the slight rise in topography. The Scheduled Stone Lud (Asset 47), the nearest designated asset to the Proposed Development (c. 1.3km from Turbine 2), lies beyond the rise of land to the southeast and is not visible from ground level at the location of Turbine 1 (Plate 10-2-10).

The central-eastern area of the Proposed Development Site was under long grass at the time of the survey.

Part of the non-designated settlement of Swarclett (Asset 70) is located within this area of rougher ground. Within the Proposed Development Site, these remains comprise a partially standing drystone wall (Asset 70a; Plate 10-2-11), with a drainage ditch (Asset 70b) present on the external southeast side, and the rectangular footings of two buildings (Assets 70c and 70d; Plates 10-2-12 and 10-2-13 respectively).

Due to the obscuring vegetation, additional features were difficult to discern by eye however the uneven ground conditions and undulations underfoot may represent fragments of associated degraded enclosures and cultivation furrows.

The quarry (Asset 96) depicted on the 1873 OS map at the southwest external corner of the drystone walled enclosure (Asset 70a) was also viewed, partially under grass but still open (Plate 10-2-14). A more substantial building (Asset 70e), also part of Asset 70 but outwith the boundary for the Proposed Development Site, is located to the southeast of this cluster of Swarclett remains (Plate 10-2-15).

Uninterrupted ground-level views towards the Scheduled Stone Lud (Asset 47) were only possible from the southeast portion of the Proposed Development Site (from northeast of Swarclett Asset 70 to the southeast corner of the Proposed Development Site where the stand of commercial forestry plantation and downhill slope progressively screen the view entirely).

From this vantage point, the Stone Lud (Asset 47) complex lies partway up a gentle slope that rises to the east, at the edge of a pastoral field, south of scattered post-medieval and modern buildings that form the hamlet of Bowertower (Plate 12-2-16).

Dense clusters of gorse and broom vegetation grow along the boundary wall and creep into the field itself, and while the recumbent stone and cairn elements of the Stone Lud complex are by nature low-lying and unobtrusive, the standing stone is mostly lost among the evergreen vegetation that both backs the asset from this view and partially intervenes it.

The rising topography beyond the standing stone also means that even without vegetation, the stone would not visibly protrude above the skyline in this view.

The location for Turbine 2 is within a pastoral field midway up the west-facing slope of the Proposed Development Site.

This was not accessed directly due to cattle in the field, but was viewed from the adjacent field (Plate 10-2-17). At ground level, views to the north through to the southeast are screened by the rise of the hill and the remnants of the commercial forestry plantation to the south of Proposed Development Site (Plate 10-2-18). This screens views towards Scheduled Stone Lud (Asset 47).

Open views to the southwest, west and northwest are unobstructed.

Three drainage ditches (Assets 108, 110 and 111; Plate 10-2-19) aligned north-northwest/south-southeast delineated the fields in the southern extent of the Proposed Development Site and are consistent with field boundaries depicted on the 1873 OS maps.

A large post-medieval or modern clearance cairn (Asset 109; Plate 10-2-20) was also viewed. A Caithness flagstone boundary wall (Asset 112) encloses the southwest-most field and is also consistent with the 1873 OS mapping boundaries. Finally, a large probable clearance cairn (Asset 113) was observed within this latter field (Plate 10-2-21). This could not be accessed due to a mature barley crop but was viewed from the field immediately north.

10.4.6 Setting Assessments

All designated assets within the ZTV were subject to a setting assessment survey, subject to accessibility. The weather was variable with both sunny and overcast conditions and some low-lying cloud, but with generally fair visibility. The observations made during these visits are largely discussed in Section 10.4. The detailed assessment can be consulted in Technical Appendix 10-3 Setting Assessment.

10.5 Assessment of Effects and Mitigation

10.5.1 Construction Effects

During construction, direct impacts are likely to occur from vegetation clearance, earth moving operations, track construction and track widening, turning head construction, and construction of all other associated infrastructure (turbine bases, battery storage, lay down areas, compounds, drainage, etc.)

Setting impacts relating to construction would be short term temporary effects and may occur due to the introduction of construction machinery on-site, additional construction traffic and construction of compounds.

It is therefore considered that setting effects resulting during construction would not exceed the predicted operational effects upon the setting of heritage assets. As such, the potential for setting effects is considered under operational effects only.

A total of 12 non-designated heritage assets (Assets 70, 96 and 104-113) have been identified within the Proposed Development Site, with one further asset (Asset 103) identified immediately adjacent to it (Figure 10-10).

The Proposed Development has been designed to avoid or minimise direct impacts on known heritage assets where possible, however a number of these assets could potentially be directly impacted by the Proposed Development and are summarised in Table 10-7. Their relative importance and predicted level of effect has been classified using the methodology outlined in Tables 10-2 to 10-5.

Table 10-7: Non-designated Heritage Assets Brought Forward for Assessment of Direct Effects

Asset No.	Designation	Description	Importance	Magnitude of Impact	Level of Effect
70a	Non-designated	Post-medieval drystone wall forming square enclosure	Negligible	Low	Negligible
70b	Non-designated	Post-medieval drainage ditch/ boundary ditch	Negligible	Negligible	Negligible
70c	Non-designated	Post-medieval building footing	Low	Negligible	Negligible
70d	Non-designated	Post-medieval building footing	Low	Low	Negligible
96	Non-designated	Post-medieval quarry	Negligible	Medium	Negligible
104	Non-designated	Modern agricultural building	Negligible	Low	Negligible
105	Non-designated	Post-medieval field clearance	Negligible	Low	Negligible
106	Non-designated	Post-medieval drainage ditch/boundary ditch	Negligible	Low	Negligible
107	Non-designated	Modern spoil heap	Negligible	Negligible	Negligible
108	Non-designated	Post-medieval drainage ditch/boundary ditch	Negligible	Low	Negligible
110	Non-	Post-medieval drainage	Negligible	Low	Negligible

Asset No.	Designation	Description	Importance	Magnitude of Impact	Level of Effect
	designated	ditch/boundary ditch			
111	Non-designated	Post-medieval drainage ditch/boundary ditch	Negligible	Low	Negligible
112	Non-designated	Post-medieval flagstone boundary wall	Negligible	Low	Negligible

The majority of assets recorded within the Proposed Development Site that have the potential to be impacted by construction works are non-designated assets of Negligible importance

In particular post-medieval drainage ditches (Assets 106, 108, 110 and 111) which double as field boundaries, a post-medieval drystone enclosure wall (Asset 70a), a post-medieval flagstone boundary wall (Asset 112), a post-medieval quarry (Asset 96), a modern clearance cairn (Asset 105) and a modern spoil heap (Asset 107).

The Proposed Development infrastructure layout is not expected to require the removal of these assets in their entirety, and the predicted overall level of effect would be **Negligible** which is not considered significant.

Assets 70c and 70d comprise the remains of two non-designated post-medieval buildings associated with the settlement of Swarclett (Asset 70). These are considered to be of Low importance as they contribute to our understanding of the historic environment at a local level.

The Proposed Development infrastructure layout in its current design would have, at worst, a Low magnitude impact on Asset 70d and a Negligible impact on Asset 70c, both of which would result in a **Negligible** overall effect which is not considered significant.

Direct impacts include the possible disturbance of hitherto unknown archaeological remains within the Proposed Development Site. Given the presence of known heritage assets within the Proposed Development Site, and within close proximity to it, potential for further such remains is considered be Low for early historic, medieval and modern remains, Low to Medium for prehistoric remains, and High for post-medieval remains.

A lack of modern intrusive archaeological investigations (events) in the area means that these potentials can only be cautiously ascribed and the importance of any such assets is by their very nature unknown.

The known post-medieval and modern heritage assets within the Proposed Development Site range in importance from Negligible to Low. Assuming that unknown heritage assets within the Proposed Development Site are of similar levels of importance there is the potential for effects ranging between Negligible and Moderate, with Moderate adverse level effects potentially being considered significant.

The potential for assets of High importance within the Proposed Development Site, however, cannot be ruled out. It has been observed that many of the significant designated prehistoric assets recorded within the 5km and 10km Study Areas are sited upon prominent hilltops and ridgelines with suggestions of deliberate placement for intervisibility with other prehistoric monuments or prominent landforms.

The Proposed Development Site's eastern extent occupies a hill that, when viewed from the surrounding landscape, is recognisable as a prominent landform in its own right,

and is intervisible with Stone Lud (Asset 47), Stemster long cairn (Asset 9) and Earney Hillock long cairn (Asset 36).

In conjunction with this geographic setting, the relatively unimproved nature of the ground along the northeast, east and southeast periphery of the Proposed Development Site (also viewed as the area outwith the historically improved fields southwest of Swarclett (Asset 70)) suggests good potential for the preservation of sub-surface remains.

The plough zone within the improved fields may also be shallow and still have potential for the survival of sub-surface remains.

10.5.2 Operational Effects

Direct effects upon any known or previously unknown archaeological remains which may be present within the Proposed Development Site will 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.

This assessment considers the potential for impacts upon the setting of all designated heritage assets within 5km of the Proposed Development Site (Figure 10-11), and the considered to be nationally important including any Scheduled Monuments, Category A Listed Buildings, Inventoried Gardens and Designed Landscapes, Inventoried Battlefields and World Heritage Sites within the ZTV within 10km (Figure 10-12).

Where accessible, site visits were made to designated assets which the ZTV suggested would have intervisibility with the Proposed Development. Consideration was also given to designated assets outwith the ZTV, where key views towards these assets would include turbines from the Proposed Development.

Designated assets which had no potential intervisibility with the Proposed Development, or did not include the Proposed Development turbines within key views towards such assets, were scoped out of further assessment. The assessment has been informed by ZTV modelling, site visits, wireframes and photomontages (Figures 5-2-2, 5-3-2, and 10-11 to 10-20) as appropriate.

In response to the Pre-Application and Scoping consultation requests, as detailed in Table 10-1, HES requested detailed assessment on the settings of the following designated assets:

- Sordale Hill, Cnoc na Ciste, Chambered Cairn (Asset 27);
- Halcro Manse, Broch 640m S of (Asset 35);
- Earney Hillock, Chambered Cairn 720m NE of Granton Mains, Bowermadden (Asset 36)
- Nipster, Henge 250 NNW of (Asset 43);
- Cairn of Heathercow, Long Cairn, Brabster Moss (Asset 44);
- Ring Hillock, Cairn 280m S of Breezy Brae (Asset 46); and
- Stone Lud, Standing Stone, Recumbent Stone and Cairn 240m WSW of Ludstone Cottage (Asset 47).

Detailed assessments of these assets, as well as Stemster long cairn (Asset 9), are included within this Chapter and supported by Figures 5-5-2, 5-5-3 and 10-13 to 10-20. Technical Appendix 10-3 Setting Assessment details the setting assessment for all designated assets.

Stone Lud, Standing Stone, Recumbent Stone and Cairn 240m WSW Of Ludstone Cottage (Asset 47)

Stone Lud comprises three elements set within two Scheduled area extents: a 2.2m tall standing stone (Stone Lud) and a very low-lying grass-covered cairn in a circular northern Scheduled area, the latter of which is partially bisected by a nearby post-medieval drystone wall; and a recumbent stone in a smaller circular Scheduled area c. 23m to the southeast of the standing stone (Technical Appendix 10-2; Plate 10-2-22).

These three elements of Asset 47 are located at the southern edge of a pastoral field, set on a slight shoulder of a broader northwest-facing slope that gently inclines to the southeast at a height of 80m Above Ordnance Datum (AOD). The wall stands adjacent to the southeast Scheduled Area and bisects the northwest Scheduled Area. The standing stone is located c. 6m from the wall.

Tall stands of gorse are present along this wall, through which only small windows of visibility to the landscape beyond to the south are possible (Technical Appendix 10-2; Plate 10-2-23). To the north of the Scheduled Monument are several post-medieval and modern buildings and post-medieval field systems that make up Bowertower hamlet. In the middle distance and along the skyline to the east are stands of commercial forestry plantations.

Overall, the long-ranging outwards views from the Scheduled Monument are restricted to the northwest and north, the drystone wall and gorse to the south and the rising topography to the east precluding, for the most part, any long-ranging views.

The complex is believed to be Late Neolithic to Early Bronze Age in date, however a lack of modern excavation and scientific dating limits interpretations about the exact chronology of the site, the degree of contemporaneity of its different elements, and the function of the complex.

The Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) record in 1911 that the cairn appeared to have been partially excavated, with later speculation that a depression around the recumbent stone may also have been signs of attempted excavation.

The OSA for the parish of Bower (Smith 1793, 521) and the RCAHMS listing note a local tradition that associated the site with the burial of a 10th century Orkney Earl named Liotus.

Whilst this is dismissed in the same RCHAMS report as circumstantial place-name evidence, it is likely that such folklore may have encouraged antiquarian investigation and/or attempted looting. There are, at present, no on-site resources that explain the asset or assist visitors with understanding the landscape and archaeological context of the asset.

Extensive and long-ranging outward views were possibly a key consideration of the asset's original setting. The adjacent post-medieval wall and vegetation screen a vast southern viewshed over much of northeast Caithness's low-lying expanse, the skyline broken by the prominent mountain peaks of Scaraben, Smean and Morven some 40km distant.

Views to the north extend to the headlands that form Dunnet Bay, while the eastern view is limited by rising topography.

Significantly, views to the west would have included the Neolithic Stemster long cairn (Asset 9), appearing as a pronounced feature at the peak of Stemster Hill. Today the prominence of Stemster long cairn (Asset 9) is diminished by the large modern water reservoir immediately adjacent to it that detracts from how prominently visible the cairn would have been atop the hill.

As will be discussed in relation to the setting assessment for Stemster long cairn (Asset 9), the Neolithic burial monuments atop this hill experienced a significant degree of interaction by later Bronze Age communities and it is likely that these monuments, and the hill by association, would have been an important location in the consciousness of the Bronze Age communities in the area.

If indeed of Bronze Age date, Stone Lud and its elements would have been constructed with the Stemster long cairn (Asset 9) being an already established, ancient monument in a highly visible location, and while intervisibility with this monument and the hill in general may not have been the principle factor in the siting of Stone Lud, it may well have been a contributing one.

In their Pre-Application advice response (2021), HES commented that;

> "…[Stone Lud] *sits within broad, gently undulating, upland surroundings, with, despite an agricultural drystone dyke nearby, wide, open views in all directions. The sense of remoteness, upland setting and open views contribute significantly to the monument's setting and are sensitive to change*".

However, the impact of the drystone wall and the gorse vegetation that grows alongside prevents any visibility of the standing stone in views towards it from the south and west, and when viewed from afar or from an elevated western position such as atop Stemster Hill, the standing stone is lost in the gorse and cannot be easily discerned.

From the asset itself, the wall and gorse almost entirely screen the significant south and westward views from the monument, which are impossible to experience but for small windows through the vegetation that must be looked through when at the wall itself, with the standing stone behind the viewer (Plate 10-2-23).

When the complex is viewed from afar to experience it within its wider landscape (i.e., Figures 5-2-2b and 5-3-2g), the prominence of the standing stone element is challenged by the height of the gorse and a series of fence posts, both of which reduce its prominence as a vertical structure on a ridgeline.

As the gorse is evergreen these diminishing factors are a year-round impingement on the setting of Stone Lud. The key characteristics of the asset's current setting are the long-ranging outward views that are possible to the north and northwest, the limited views it has to the south, and the intervisibility it shares with Stemster long cairn (Asset 9) and potentially also with Ring Hillock cairn (Asset 46).

As such, the complex is judged to have a High relative sensitivity to changes which would affect those setting relationships.

The nearest turbine will be 1.3km to the northwest of the asset and the Proposed Development will be prominently visible in northwest views as turbines located in the near distance, backed by hills, forming a new group within a local landscape that does not feature much tall architecture (Figures 5-2-2a to 5-2-2e; 5-3-2a, 5-3-2f and 5-3-2g; and 10-20).

This will cause an adverse impact in the sense that the turbines will dominate the skyline in this view. However, while prominently visible, the turbines will not overwhelm the vertical elements of the asset significantly more than the present gorse, wall and fence line already do.

While this impact will be adverse, this impact is a result of the proximity and size of the turbines rather than the obstruction or detraction from the key cultural heritage aspects of the monument. The turbines will not directly intervene or obstruct key views towards Stemster long cairn (Asset 9) and will instead stand further north in this line of sight.

The turbines will also not intervene directly between Stone Lud and Ring Hillock cairn (Asset 46) to the north-northwest, standing instead to the south of this line of sight. The rolling landscape and ridgeline of the hills that are visible in the current setting to the northwest will not be overly screened by the turbine bases.

It is considered therefore that the key characteristics of Stone Lud's current setting would at worst experience a Medium magnitude impact. This, per Table 10-5, would give an overall **Moderate adverse** level of effect to the asset's setting.

Whilst this is considered significant in EIA terms, the Proposed Development would not significantly erode the key characteristics of the asset's setting or affect the ability to appreciate the asset in its current form, and so it is not considered that the Proposed Development would result in a significant adverse impact upon the asset's setting. As such it is not considered incongruent with regard to NPF4.

Scheduled Stemster, Long Cairn 790m NNW Of Roadside (Asset 9)

Stemster long cairn is a Neolithic long cairn under grass, situated at the crest of Stemster Hill at 128m AOD, adjacent to the lower Sordale Hill. It extends in a north-northwest/south-southeast alignment and stands to a height of c. 2m at its southeast end, declining in height to the northwest.

Immediately beyond the southeast extent of the asset is a large covered water reservoir which appears as a square-shaped mound c. 40m by 40m in size, standing to a height of over 2m tall with battered banks under grass and a concrete cap, with a small 2m tall building atop it.

The reservoir was constructed by 1959 per historical OS mapping, and construction of this possibly truncated the southeast end of the cairn. Immediately adjacent to both the cairn and reservoir, to the northeast, is a farm track.

The reservoir screens southern views from the asset and screens the asset when viewed from this direction. Some 300m northeast of the cairn stands a block of mature commercial forestry plantation, limiting views both from and towards the cairn on that axis.

When viewed from the east, these two modern elements of reservoir and forestry frame and overshadow the cairn, reducing its prominence as a focal point atop the hill.

Excluding the screened views as a result of these elements, the remainder of the outward views from the cairn are long-ranging. The hilltop itself forms the western extent of a broad V-shaped valley extending east and west from the Burn of Durran that flows north through the Proposed Development Site.

There are uninterrupted views over the Proposed Development Site, and the views extend over this to the coastal headlands to the east, to Dunnet Head and Dunnet Bay to the north, and to the hills southwest of Castletown and Thurso to the northwest.

Views to the west overlook the saddle between this peak and the neighbouring Sordale Hill which stands to a height of 109m AOD. Views beyond the lee of this to the southwest extend over the broad strath of the River Thurso.

The NRHE description records that RCAHMS, in 1911, believed that this was possibly the Stemster Shean/Shian cairn excavated by Sir Francis Tress Barry in 1904. Barry's late 19th and early 20th excavations of Caithness monuments are not necessarily informative due to a lack rigorous excavation methodology or recording (Heald & Barber 2012, 79-83).

Such is the case for Stemster long cairn (Asset 9), however a suite of illustrations by Barry's associate, John Nicolson, shed light on key characteristics of the monument. The most useful of these are the ground plan of the chamber (Nicolson 1904a), an internal elevation of the south side of the chamber (1904b), and an illustration of two artefacts (1904c).

These suggest that the cairn was mostly intact upon initial excavation, and comprised a 15ft long, 4ft 6in tall paved passage that led into the cairn from the south, passing over a threshold area into a single domed chamber with a square floor plan.

The chamber floor comprised large flagstones, and further flagstones formed the upright lower coursing of the internal west and east chamber walls, with a drystone corbelled roof above these. The south wall with the internal doorway used massive flagstones as a threshold, doorjambs and a lintel.

In each corner of the chamber were depicted a single rounded boulder, and tucked into the southwest corner of the chamber, amongst a setting of rounded stones, lay a crouched adult inhumation lying on its right side, head oriented south.

The artefact illustration (ibid 1904c) depicts a large ceramic bowl titled an "urn" measuring 1ft 3in by 10in deep, and an "urn cover" measuring 2ft 7in long and 1ft 2in wide, that looks like stone with an incised geometric pattern atop it. The context for these two artefacts within the asset is unclear.

RCAHMS also note that; "*…in the debris near the top of the cairn, another, apparently secondary unburnt interment, accompanied by pieces of an urn, now lost*" were uncovered. T

his is reminiscent of similar use by Bronze Age peoples of Neolithic funerary monuments, a practice that appears likely to have occurred in the nearby Sinclair's Sìthean (Asset 29) and Cnoc na Ciste cairn (Asset 27).

Heald and Barber (2012) observe this briefly with regard to both the Stemster long cairn (Asset 9) and Cnoc na Ciste chambered cairn (Asset 27), noting that:

> "*Where opportunity presented itself, it is clear that Bronze Age burials were inserted into Neolithic chambered cairns. In general, the evidence suggests that the chambered cairns were already ruinous when the Bronze Age burials were inserted, a process that often did further damage to the chambered cairn. These secondary burials in chambered cairns cannot, therefore, be interpreted as a continuation of Neolithic practices. Rather, they imply that the chambered cairns, though ruinous, were still venerated by the local communities. We need not doubt that convenience also played a part in the process, but it is unlikely to have been the only motivating factor... Perhaps those who undertook the Early Bronze Age burials shared our modern sense that some places are appropriate*

places for burial, consecrated to the dead or associated with burial by long tradition." (ibid, 62).

This prominent hilltop setting is significant not only for the long-ranging outward views afforded to the Stemster long cairn (Asset 9), but also for the number of prehistoric burial monuments that occupy it and the neighbouring Sordale Hill.

The Stemster long cairn (Asset 9) is one of nine Scheduled Neolithic burial cairns that are recorded on the two hills, the remainder comprising the intervisible Neolithic Cnoc na Ciste chambered cairn (Asset 27), the Neolithic Sinclair's Sìthean long cairn (Asset 29) and Stemster Hill chambered cairn (Asset 32); and the non-intervisible Mill of Knockdee chambered cairn (Asset 53), and two long cairns and one chambered cairn that comprise the Gallow Hill cairns (Asset 28).

There are also at least three other non-designated potentially prehistoric cairns, Cnoc an Tailler (NRHE Site No. ND16SE 2), and two Sordale Hill cairns (NRHE Site No..s ND16SE 63 and ND16SE 7), present on the hills.

These latter three are not morphologically distinct enough to be classified into typologies and without excavation can only be described as possible cairns.

In addition to these, a large number of lithics and stone tools including 42 leaf-shaped arrowheads, three barbed arrowheads, nine uncharacterised arrowheads, 19 stone whorls, 37 flint 'implements', 12 flint lithics and two cores of flint and chert, are recorded as having been collected from the immediate vicinity of Sordale Hill, Stemster Hill and Knockdee in the late 19th and early 20th century (NRHE Site No. ND16SE 22), but with no further contextual information.

Leaf-shaped arrowheads are an Early Neolithic type, whereas barbed arrowheads are more typical of the Early Bronze Age and indicates broadly that prehistoric activity from both periods took place here.

Stemster long cairn (Asset 9) is the most easterly of these burial monuments and serves as the eastern extent for the group, situated as it is on the screening ridgeline of Stemster Hill that precludes views to the east from the additional assets.

While its setting is likely foremost related to its probable southeast-facing entrance, its possible re-use during the Bronze Age, and its proximity and/or intervisibility with the nearby Sordale and Stemster Hill cairns, its relationship with the more distant prehistoric funerary assets to the east is likely also significant.

The asset is intervisible with the Neolithic Earney Hillock long cairn (Asset 36) and the probable Bronze Age Stone Lud complex (Asset 47), though this is difficult to discern within its current setting due to intervening wall and gorse.

The Neolithic Heathercow cairn (Asset 44) would also be intervisible were it not for the modern reservoir, and the probable Bronze Age Ring Hillock cairn (Asset 46) may also once have been intervisible, but commercial forestry intervenes in the present day.

These setting relationships form the key characteristics of the setting of the asset and contribute significantly to an understanding, appreciation and experience of it. On this basis, Stemster long cairn (Asset 9) is considered to be Highly sensitivity to changes to its setting.

The Proposed Development Site is situated within the east view from the asset, appearing at full height atop a ridgeline in the middle distance (Figures 10-13a to 10-13e).

While the turbines will extend above the horizon, their prominence is diminished by the presence of the intervening farmstead and overhead line.

As the asset's setting likely principally relates to the views it experiences to the southeast and to the west, over the hill it occupies and the inter-related funerary monuments thereupon, it is considered that the Proposed Development will not significantly impact the setting as it would not interfere in the setting relationship, outlined above, which make up its key setting characteristics.

As such, there is considered to be a Low magnitude of impact and resulting Minor adverse effect. This is not considered significant in EIA terms and would not result in in a significant adverse impact upon the asset's setting in terms of NPF4.

Sordale Hill, Cnoc na Ciste, chambered cairn (Asset 27)

Cnoc na Ciste comprises the somewhat disturbed remains of a Neolithic chambered cairn occupying the peak of Sordale Hill, east of Stemster Hill, at a height of 109m AOD. The cairn itself is under turf with some stone visible and has a sunken centre where the probable chamber was situated.

Modern fence lines converge over the cairn and it is substantially overgrown on its eastern side. Intervisible with the cairn, to the northeast, are the prominent Stemster long cairn (Asset 9) on the ridgeline formed by Stemster Hill and Sinclair's Sìthean long cairn (Asset 29) situated on the saddle between the two peaks.

To the west, the tops of three cairns comprising the Gallow Hill cairns (Asset 28) were visible, demarcating the western extent of Sordale Hill. Long-distant views are afforded to the north and south, but the intervening foreground was encompassed by the hilltop itself.

The OS Name Book (1873) records that a number of cists were found upon the summit of the cairn after the removal of earth there, hence the name Cnoc na Ciste – hill of cists. The cairn is described as a; "…*round chamber*[ed] *cairn that was partially excavated in 1895 but yielded no relics. In 1908 a food vessel was recovered from a niche in the passage wall*" (OS 1873).

The Highland HER listing includes the 2019 NMS catalogue description of the artefact as a richly decorated food vessel, acquired from Tress Barry in 1908. No further information is recorded, and it is unclear whether Barry also excavated this cairn or acquired the vessel from someone else.

The chamber is recorded as being aligned northwest/southeast, but little else is recorded and the cairn today survives in a fairly mutilated state, impacted and obscured by fence posts and vegetation. The presence of cists set into the top of a chambered cairn is suggestive of later Bronze Age activity at the cairn.

While intervisibility with the nearby contemporary funerary monuments was likely a significant element of the asset's original Neolithic setting, the principle key view is likely to be that associated with the entrance of the cairn.

As the monument's central chamber is described as northwest/southeast aligned, it is likely that the key view for this asset was towards the southeast, consistent with the entrance alignments of Stemster long cairn (Asset 9) and Sinclair's Sìthean long cairn (Asset 29).

The key characteristics for this asset's setting therefore are its southeast-facing entrance alignment and its prominent hilltop location from which it is intervisible with other

significant funerary monuments. It is judged to have a Highly sensitive setting in relation to these elements, but a lower sensitivity to change in the wider landscape.

The Proposed Development will appear as two turbines visible from hub height beyond the ridgeline of Stemster Hill to the east (Figures 10-14b, 10-14e).

The nearest turbine will be c. 4.7km distant, but both will appear of a similar height. While protruding above the ridgeline presented by Stemster Hill, they will not back the Stemster long cairn (Asset 9) and so not significantly detract from the intervisible relationship of the two cairns.

The turbines would also be seen peripherally to the key view from the cairn to the southeast, as indicated by its chamber alignment. On this basis, the Proposed Development will not significantly diminish the ability to appreciate the hilltop setting and inter-relationship with other funerary monuments.

There is considered to be a Low magnitude impact and resulting **Minor adverse effect**. This is not considered significant in EIA terms and would not result in a significant adverse impact upon the asset's setting in terms of NPF4.

Earney Hillock, chambered cairn 720m NE of Granton Mains, Bowermadden (Asset 36)

Earney Hillock is a Neolithic long cairn visible as a low-lying linear mound under grass and aligned northwest/southeast, standing to a height of c. 1.5m.

The cairn is situated within a pastoral field on a low hill with panoramic long-ranging views in all directions. A small rounded mound to the southwest of the asset is indeterminate in terms of date and function, with both a kiln and a hut circle being proffered by the NRHE description.

The asset is intervisible with the Neolithic Stemster long cairn (Asset 9) to the southwest, and the likely Bronze Age Ring Hillock cairn (Asset 46) to the northwest. Whilst Earney Hillock cairn may have been a factor in the placement of the later Ring Hillock cairn (Asset 46), given the latter's later Bronze Age date, it is the intervisibility with the Stemster cairn (Asset 9) that may be a key component of this asset's setting.

As Neolithic monuments, there is a greater likelihood of their intentionally being located to be intervisible with one another due to their contemporaneity. Like the Neolithic cairns atop Sordale hill (Assets 9, 28, 29 and 32), Earney Hillock shares a similar northwest/southeast alignment.

The key characteristics of its setting are therefore long-ranging views, in particular the southeast view along the entrance alignment axis, and its potential intervisibility with other prehistoric funerary monuments, and the asset would be Highly sensitive to changes that affect these characteristics.

The nearest turbine will be located c. 2.6km to the southwest of the asset, and the Proposed Development will appear in this view at full height with the turbines situated along a low ridgeline (Figure 10-16a to 10-16f).

These will feature in the long-ranging views to the southwest mountains that the view affords, introducing turbines to the middle distance.

However, the proposed turbines will not directly intervene between the asset and the prominent Stemster long cairn (Asset 9) or the hill it occupies, nor will the Proposed Development be located directly in other significant lines of sight (i.e., to view to Ring Hillock cairn (Asset 46) would be unaffected). The long-ranging views and potentially

significant relationships through intervisibility with other prehistoric funerary monuments would generally be preserved.

Whilst the Proposed Development will be positioned within the wider landscape setting of the asset, the key characteristics of its setting, in particular the long-ranging expansive views and intervisibility with notable prehistoric funerary monuments will remain appreciable in their current conditions.

The magnitude of impact is considered to be Low, which gives an overall **Minor adverse level of effect** which is not considered significant. This would not result in a significant adverse impact upon the asset's setting in terms of NPF4.

Ring Hillock Cairn (Asset 46)

Ring Hillock comprises the conical, grass-covered remains of a chambered cairn, thought to be Bronze Age in date. It is situated on the shoulder of a hill with extensive and long-ranging panoramic views from the north to the southwest, with the rise of the hill limiting westward views.

Dunnet Bay is visible to the north and the south views extend to the distant mountains. The asset would likely have been intervisible with several prehistoric funerary monuments including Trothanmus cairn (Asset 33) to the northwest, Stemster long cairn (Asset 9) to the south and Earney Hillock cairn (Asset 36) to the southeast.

Only Earney Hillock cairn (Asset 36) remains intervisible today, the former two screened by intervening buildings and a commercial forestry plantation respectively. Heathercow cairn (Asset 44) and Stemster chambered cairn (Asset 32) may once also have been intervisible but these could not be discerned by sight.

There may have also been intervisibility with the Dunnet chambered cairns (Asset 14) to the northeast, however sand dunes now intervene. The asset does not appear to have been excavated and so a degree of its significance derives from its archaeological potential as a well-preserved Bronze Age cairn, in addition to its intervisibility with the surrounding funerary monuments described above.

There is no clear entrance and so assumptions about significant alignments are somewhat limited. The key characteristics with regard to its setting are considered to be its intervisibility with other funerary monuments and the long-ranging views afforded from the asset. It is considered that the asset would be Highly sensitive to changes that affect these characteristics.

The Proposed Development will be visible in southeast views from the asset, featuring as group of turbines in the middle distance atop a ridgeline (Figures 10-19a to 10-19e). While these will feature prominently on the skyline and form the closest turbines to the asset, they will not intervene between this asset and the potentially significant views identified above, and expansive further views beyond the turbines and the ridgeline they occupy will still be appreciable.

Therefore, it is considered that the Proposed Development will have at worst a Low impact upon the asset's setting, and an overall **Minor adverse effect** which is not considered significant. This would not result in a significant adverse impact upon the asset's setting in terms of NPF4.

Halcro Manse, broch 640m S of, (Asset 35)

The Scheduled Halcro broch survives as a prominent subcircular grass-covered mound approximately 40m in diameter and 1.8m tall, enclosed by a post-and-wire fence within

a larger pastoral field. Believed to be a broch, the asset is identified in the 1872 OS Name Book as a mound or Pictish House (likely broch) and it is further recorded that; "…*a quantity of human bones*…" were found within its south side.

The 1873 OS map also identifies it is a Pictish House but the 1906 OS map identifies it as a cairn instead. The asset has never been excavated, however, the morphology of the structure is described as consistent with other large "mound on mound" broch sites in Caithness.

It is situated on a terrace that forms part of a gently inclining rise, itself forming the western edge of a broad shallow topographical bowl. This bowl somewhat limits views to the west and south due to the rising topography in the middle distance but allows for extensive long-ranging views to the north and east.

This bowl forms the principle setting for the asset, comprising what would likely have formed the surrounding farmland and settlement area for the Iron Age community who utilised the broch, though any trace of these has been ploughed flat with later farming activity.

It is likely that a watercourse existed nearby but installation of post-medieval and modern drainage ditches obscure where this may have originally been. The asset would have been intervisible with other prehistoric monuments in the landscape, such as the Neolithic Heathercow cairn (Asset 44), but it is unlikely that this intervisibility would have been a key consideration of its setting or form a key view.

Instead, the key characteristics of its setting are its location at the edge of the aforementioned topographical bowl, with the land surrounding it likely in use as surrounding settlement and farmland for the broch. It is considered that the asset would be Highly sensitive to changes in this immediate setting, with sensitivity declining beyond the topographic rises.

The nearest turbine to the asset will be 3km to the northwest. Directly intervening between the asset and the Proposed Development Site are a stand of post-medieval farm buildings, with further post-medieval and modern settlement and infrastructure including buildings, low-lying telegraph line OHLs, and agricultural sheds, in the vicinity.

The broch could not be discerned from the Proposed Development Site, lying beyond both the stand of intervening commercial forestry and the further Bowertower hamlet to the southeast.

The turbines will be visible from just below hub-height, situated beyond and partially screened by the rise of land that forms the northwest edge of the topographical bow that comprises its setting (Figure 10-15), and set beyond the dispersed rural settlement buildings comprising the nearby hamlets of Halcro and Bowertower.

It is considered that the magnitude of impact would be Low, with the turbines present immediately beyond the periphery of the setting of the asset. This will result in a **Minor adverse effect** which is not considered significant. This would not result in a significant adverse impact upon the asset's setting in terms of NPF4.

Nipster, henge 250m NNW of (Asset 43)

This Scheduled Class I henge survives predominantly in crop-mark form and is situated within an arable field. A substantial circular ditch with a possible entrance in the west side is visible on aerial photographs, and the HES designation description records the

upstanding remains as consisting of a faint depression and counterscarp with an internal area of some 40m in diameter.

At the time of the setting assessment site visit, the field was under mature cereal crop and no upstanding remains could be discerned. The asset is situated on the shoulder of a southwest-facing slope that forms the north side of the Loch Watten bowl. It overlooks this, with views stretching to the hills that form the southern rim of the bowl and is also intervisible with Stemster Hill, and Stemster long cairn (Asset 9), to the northwest.

Views to the east are screened by sparse coniferous trees that line the farm track running north to south adjacent to the field. The topography inclines to the north and northeast to a ridgeline in the middle distance, and views in this direction overlook several post-medieval and modern farmsteads and dwellings that are situated adjacent to the B874 road.

Henge monuments date to the Late Neolithic and Bronze Age and comprise a fairly enigmatic monument type in the Scottish archaeological record, one believed to have had a predominantly ceremonial or ritual function (ScARF 2012, 111).

They are sometimes found to post-date earlier circular monuments such as timber and stone circles, around which they are constructed (ibid 110), and in the case of the henges at Forteviot, appear to show a complex and long-lasting biography whereby they become a focus for later mortuary activity (Brophy & Noble 26).

Consideration of wider landscape significance with regard to relationships with other contemporary monuments is challenging considering the importance and emphasis these monuments appear to have initially placed on enclosure and the limiting of access via only one or two entrances (Brophy & Noble 2012, 31), though this may have changed with later use of the sites (ibid, 33).

The Nipster henge has never been excavated and so interpretation of its function and assessment of its setting is naturally fairly limited.

The entrance in the western extent of the ditch may indicate that views through this angle were significant, and these would overlook the declining topography that leads down into the bowl formed by Loch Watten, with views to the northwest encompassing Stemster Hill and the long cairn (Asset 9) atop it, though this latter is now partially screened by the adjacent modern water reservoir.

These are the key appreciable characteristics of its setting in its current form, and it is considered Highly sensitive to changes with regard to these.

The nearest turbine will be c. 3.7km to the north of the asset, and the Proposed Development will be visible as two partially overlapping turbines situated beyond the ridgeline to the north; they would be visible from mid-tower up (Figure 10-17).

Considering that the turbines will be located beyond this ridgeline, and that any significant views for the asset were likely to the west, it is considered that there will be, at worst, a Low impact upon the setting of the asset by the Proposed Development. This will result in a **Minor adverse effect** which is not considered significant. This would not result in in a significant adverse impact upon the asset's setting in terms of NPF4.

Cairn of Heathercow, long cairn, Brabster Moss (Asset 44)

Heathercow cairn (also named Heather Cow and Heathercro) comprises the Scheduled remains of a Neolithic Orkney-Cromarty-type long cairn, situated at the crest of a small hillock. It survives as a somewhat elongated mound, extending

northeast to southwest under grass, heather and gorse, the latter of which means the dimensions are not easily visible. The cairn is described in the OSA for the parish of Bower as being; "…*surrounded by 6 or 7 circles, described at different distances around by large stones set on edge, and seems to be some monument of Druidical antiquity*…" (Smith 1793, 522), but no trace of these external stone settings is visible today.

The cairn was partially excavated in the late 19th and early 20th centuries, in the latter instance by Tress Barry. The NRHE listing records that horse teeth and urns containing human remains were recovered from these works, but there is little further detail.

An illustration of the cairn by Nicolson (1904d) depicts a rounded northeast end containing a pentagonal chamber with an entrance leading out to the south, and a horned extension visible to the southwest (the NRHE description for the asset does however state that Henshall disputed the existence of a horned forecourt).

The asset commands extensive and long-ranging views across northeast Caithness, with Dunnet Bay and the sea beyond visible in views to the northwest, and Noss Head and the surrounding coastline visible to the southeast, both some 10km distant.

A stand of commercial forestry plantation interrupts southward views that could have originally stretched to the southern mountains. The asset was likely highly visible in the landscape from afar and it is probable that intervisibility with other prehistoric funerary monuments was intentional.

Warth Hill, 15km to the northeast, features prominently in views to the northeast and it is possible that the Scheduled cairn atop it (SM503; outwith Study Areas) may have once been intervisible. The Stemster long cairn (Asset 9) is intervisible but its prominence is marred somewhat by the water reservoir adjacent, which exceeds it in height.

It is likely that Earney Hillock cairn (Asset 36) may have also been visible although this was not discerned during the site visit, likely due to the low-lying hedges that surround the asset today.

Also, likely once intervisible with the asset, but now screened from view by intervening commercial forestry plantations, is the Scheduled Backlass cairn (Asset 10) to the south-southwest.

The key characteristics of its setting are the potentially significant intervisible relationships it shares with the aforementioned hill-top cairns, and its wide-ranging outward views, particularly those that extend to the south along the entrance alignment. The asset is considered Highly sensitive to changes in its setting.

The Proposed Development will be visible in northwest views from this asset as a narrow group of two turbines in the middle distance, set partially beyond a low intervening ridgeline and with distant hills partially backing them (Figure 10-18a- to 10-18e).

Whilst the Proposed Development turbines would be set among the northwest view, which looks towards Ring Hillock (Asset 46), Earney Hillock (Asset 36) and Stemster long cairn (Asset 9), the turbines will not directly intervene between the asset and these monuments, and the ability to appreciate the extensive long-ranging views afforded from the cairn will not be materially diminished.

Considering the apparent south-facing entrance, it can also be argued that this is the predominantly significant view afforded from the asset, and this would remain unaffected by the Proposed Development as it will not be in view in this angle.

There is therefore judged to be, at worst, a Low impact upon the setting of the asset by the Proposed Development, resulting in a **Minor adverse effect** which is not considered significant. This would not result in in a significant adverse impact upon the assets setting in terms of NPF4.

10.5.3 Decommissioning Effects

The decommissioning phase, detailed in Chapter 3 Description of the Development, will include the removal of all major equipment and structures, unless required for the continuation of current land practice, and will see the affected areas reinstated.

At the time of the assessment, the future baseline conditions (environment and other developments) cannot be predicted, and the best practice decommissioning guidance methods are likely to change during the lifetime of the Proposed Development.

However, based on the current baseline and proposal for decommissioning, 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. 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 and infrastructure following decommissioning, leading to a Neutral effect.

10.5.4 Cumulative Effects

Potential Cumulative Construction Effects

Cumulative effects relating to cultural heritage are, for the most part, limited to operational 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.

Potential Cumulative Operational Effects

The assessment of cumulative operational effects will be undertaken in a similar manner to that of the operational effects but will take into consideration other developments, including those which are operational, under construction, consented or proposed as shown on Figure 1-3.

Cumulative operational effects have only been specifically considered for those assets identified for detailed assessment during consultation (Table 10-1) as well as for all assets for which the effect upon their setting would be **Moderate adverse** during the Operational Phase and significant in EIA terms.

Stone Lud, Standing Stone, Recumbent Stone and Cairn 240m WSW of Ludstone Cottage (Asset 47)

The setting for the Scheduled Stone Lud (Asset 47) relates to its extensive views that would have been commanded from its location in a broad near 270-degree arc from the southeast to the northeast, and potentially also the intervisible relationships it shares between other prehistoric funerary monuments in the region.

This setting is impeded today by the drystone wall and gorse vegetation adjacent to it that limits long-ranging views to and from the south and southwest.

In northwest views overlooking the asset towards the Proposed Development, the consented Pentland Offshore wind farm will potentially be visible as extreme blade tips only beyond a block of commercial forestry on the intervening ridgeline, while Hoy will be visible from hub height (Figures 5-2-2c and 5-3-2b).

Considering the large intervening distances between these and the Proposed Development however, they are unlikely to be easily visible to the eye and it is considered there will be no cumulative impact in combination with the Proposed Development and thus no cumulative effect.

The potential future cumulative baseline in these views will include the in-planning Cairnmore Hill wind farm and the in-scoping Red Moss wind farm (Figures 5-2-2c and 5-3-2b). The former will be visible from hub height with blade tips within the Pentland Offshore group, set slightly closer and perhaps marginally more visible on the ridgeline.

The Red Moss turbines will be prominent in the middle-distance and the Proposed Development would increase the proportion of the overall view that will be occupied by wind farm development, visible as four turbines of similar height extending across the northwest viewshed.

It is considered that the addition of the Proposed Development to this theoretical cumulative baseline would not result in an increased impact worse than that which is predicted to result from the Proposed Development on its own.

Therefore, a Medium cumulative impact resulting in a **Moderate adverse** cumulative effect is predicted in the instance that Red Moss was to be consented.

Whilst a significant effect in EIA terms, the key characteristics that contribute to the setting of the complex in its current setting, i.e., the expansive long-ranging views achievable to the northwest and northeast, and intervisibility with the Stemster long cairn (Asset 9), would still be appreciable.

There would not be an adverse impact upon the integrity of the asset's setting in terms of NPF4.

Stemster long cairn (Asset 9)

Stemster long cairn's setting relates to its proximity to, and intervisibility with, the other hilltop funerary monuments to the west, and likely also the invisibility with ritual and funerary monuments to the east such as Earney Hillock (Asset 36), Stone Lud (Asset 47), and Heathercow cairn (Asset 44).

In the easterly views from the asset towards the Proposed Development, the operational and consented wind farms of Stroupster, Stroupster Hill and Slickly will be visible as a low-lying band of turbines on the horizon visible at full height (Figure 10-13a-f). The addition of the Proposed Development to this cumulative baseline will create a

large wind farm development in the middle distance, partially overlapping the Slickly turbines, and exceeding the height of those further back, however it will only slightly extend the band of visible turbines clustered in that viewshed.

These developments and the Proposed Development will not interrupt any of the potentially significant lines of intervisibility between the asset and Earney Hillock (Asset 36), Stone Lud (Asset 47), and Heathercow cairn (Asset 44).

The operational Lochend wind farm forms a separate group to the north but is at present fully screened by intervening commercial forestry plantation. While the Proposed Development will also extend the turbine group towards Stone of Lud (Asset 47), the present gorse and stone wall screen Stone Lud in views from Stemster long cairn regardless.

It is judged that the Proposed Development in combination with this group of wind farms will not worsen the impact upon the setting beyond that predicted for the Proposed Development alone. A Low cumulative impact is predicted, and thus **Minor adverse** cumulative effect which is not considered significant. This would not result in a significant adverse impact upon the assets setting in terms of NPF4.

With regard to a future potential cumulative baseline, the in-scoping Red Moss wind farm will similarly intervene between the Slickly, Stroupster and Hill of Stroupster wind farms, with the Proposed Development appearing at a similar height to these, extending the band of middle distance turbines southwards.

It will still appear as a single group of turbines however, and so will not alter the predicted Low cumulative impact and resulting Minor adverse cumulative effect. The intervisibility with the Earney Hillock cairn (Asset 36), Stone Lud complex (Asset 47), and Heathercow cairn (Asset 44) will be uninterrupted and thus remain appreciable.

The in-planning Hollandmey and in-scoping Lochend Extension and Greenland turbines will cluster around the existing separate Lochend group and will be fully screened by the intervening commercial forestry plantation. The felling of this forestry will not materially alter the judgement of the cumulative effect considering that the operational Lochend wind farm stands as a separate group already.

Sordale Hill Cnoc na Ciste cairn (Asset 27)

Much of the significance of the Cnoc na Ciste cairn relates to its prominent central position atop Sordale hill and its proximity and/or intervisibility with the surrounding nearby funerary monuments (Assets 9, 29, 32, 28 and 53).

In eastward views from this asset, the operational and consented wind farms of Lochend, Slickly, and Hesta Head will be visible only as extreme blade tips above the ridgeline (Figures 10-14a to 10-14f). These are unlikely to be easily visible to the eye and it is considered there would be no cumulative impact in combination with the Proposed Development and thus no cumulative effect.

The potential future cumulative baseline will include blade tips visible of the in-scoping Red Moss turbines, and theoretical visibility at hub and blade height of the in-planning Hollandmey and in-scoping Lochend Extension and Greenland wind farms, forming a second group of turbines to the north around the operational Lochend wind farm.

The Proposed Development will extend the group formed by the Red Moss turbines but will only slightly exceed these in height when viewed from this asset. These wind farms will all be set beyond the ridgeline that forms the natural eastern extent of the setting of

Cnoc na Ciste cairn, and while the key view towards Stemster long cairn (Asset 9) will be framed by the two turbine groups, it will not significantly diminish the ability to understand and appreciate this degree of intervisibility any further than the modern reservoir and commercial forestry plantation that frame it have.

Therefore, it is considered that there will be a Negligible cumulative impact, resulting in a **Minor adverse** cumulative effect, which is not significant. This would not result in in a significant adverse impact upon the asset's setting in terms of NPF4.

Halcro Manse, broch 640m S of (Asset 35)

The setting of the broch near Halcro manse relates principally to the topographical bowl it occupies, over which the asset likely exercised a degree of control and where the contemporary settlement and agricultural remains would have been sited.

The Proposed Development Site lies beyond a ridgeline that forms the northwest extent of the topographical bowl the broch occupies and is thus beyond the extent of its setting.

No operational or consented wind farms are present within the northwest view towards the Proposed Development from the asset (Figure 10-15), thus there will be no cumulative effect in that regard.

The potential future cumulative baseline in this view includes only the in-scoping Red Moss wind farm, which will appear atop a ridgeline to the north. In combination with this, the Proposed Development will form a second distinct group of turbines and double the number of turbines visible in the middle-distance.

The turbines in the two groups will appear as of similar height and scale, set on and beyond the same ridgeline. Although visible, both groups will be set beyond the periphery of the asset's setting, which would not extend beyond the ridgeline.

The magnitude of cumulative impact is therefore judged to be Low, and the level of potential future cumulative effect would be at worst **Minor adverse** and not significant. This would not result in in a significant adverse impact upon the asset's setting in terms of NPF4.

Nipster, henge 250m NNW of (Asset 43)

This asset is not readily discernible as an upstanding monument, nor is its function well understood. Henges are believed to have been ceremonial and/or ritual monuments with complex relationships with their surrounding landscapes.

It is probable that the key views in relation to this asset, were they of significant consideration to its placement and function, were to the west (the axis where its entrance appears to have been), possibly with a significant intervisible relationship with Stemster long cairn (Asset 9), and perhaps also to the south, extending over the Loch Watten basin.

No operational or consented wind farms are present within the north view towards the Proposed Development from the asset (Figure 10-17), thus there would be no cumulative effect in that regard.

The potential future cumulative baseline in this view would include only the in-scoping Red Moss wind farm, which will appear from beyond a ridgeline from hub height. In combination with this, the Proposed Development will appear as a second group of overlapping turbines, visible from mid-tower height but also set beyond the ridgeline.

By being situated beyond the ridgeline, both wind farms are likely beyond the asset's setting, and although they will be visible on the horizon and the Proposed Development will extend the number of turbines in the north view, they will still occupy a relatively small proportion of the overall arc of long-ranging views that extend to the south, west and north afforded from this asset.

The magnitude of cumulative impact is therefore judged to be Low, and the level of potential future cumulative effect would be, at worst, **Minor adverse** and not significant. This would not result in a significant adverse impact upon the asset's setting in terms of NPF4.

Cairn of Heathercow (Asset 35)

The setting of Heathercow cairn relates to its prominent landscape position atop a hill with extensive long-ranging views and intervisibility with contemporary prehistoric funerary monuments.

Potentially significant views towards the hilltop cairns of Stemster (Asset 9) to the northwest, Backlass Hill cairn (Asset 10) to the southwest, and Warth Hill cairn (SM503; outwith Study Areas) to the northeast have been identified, however the entrance within the cairn chamber leading to the south would indicate that this axis and the view from it would have been of principle significance.

The operational and consented wind farms of Baillie and Pentland Offshore will be theoretically visible from hub and blade height beyond the ridgeline of the distant hills to the northwest, beyond the Proposed Development (Figures 10-18a to 10-18e).

In reality these will likely be screened by intervening forestry and it is considered that there will be no cumulative impact as a result of this screening, and therefore no cumulative effect.

The future potential cumulative baseline includes the in-planning Cairnmore Hill wind farm, grouped with the Pentland Offshore turbines and likely similarly screened from view.

The in-scoping Red Moss turbines will feature prominently in the middle distance, and the Proposed Development in combination with this will create two closely-situated groups of large wind turbines, extending the arc of visible turbines to the south.

This arc will still however be relatively small, limited to the northwest, and the turbines will appear fairly congruous in terms of height and size. They will not directly intervene and obscure the relationships with the above assets.

It is judged that there will be, at worst, a Low cumulative impact, resulting in a **Minor adverse** cumulative effect, which is not significant. This would not result in a significant adverse impact upon the asset's setting in terms of NPF4.

Earney Hillock cairn (Asset 36)

The setting of Earney Hillock cairn relates to the extensive outward views afforded from it and towards it from the surrounding landscape. It is intervisible with Stemster long cairn (Asset 9) and Ring Hillock cairn (Asset 46).

Operational and consented wind farms within the southwest view include the distant Boulfruich, Bad a' Cheo, Halsary Tacher A, B and C, Causeymire, Achlachan, Achlachan 2 and Limekiln wind farms. Of these, only Halsary, Bad a' Cheo and some of Causeymire will be visible above the intervening ridgelines from hub height, the

remainder will be visible as blade tips only and will likely be screened by intervening forestry and buildings (Figure 10-16c).

These visible turbines will extend in one low-lying band close to the horizon, predominantly backed by further mountains and well beyond the setting of the asset.

These will be at such a distance to the Proposed Development (c. 11km) that although the Proposed Development will extend the arc of visible turbines, it is judged there will be, at worst, a Low cumulative impact and overall Minor adverse cumulative effect which is not significant.

With regard to a potential future cumulative baseline, the in-planning Tormsdale wind farm and Watten wind farm will be grouped among the existing band of consented and operational wind farms to the south and would not meaningfully alter the visibility of this band of turbines when viewed from the asset.

The in-scoping Red Moss turbines will be sited in the immediate foreground of the asset and will in itself likely have a moderate adverse effect on the setting of the asset due to this proximity. In combination with this development, the Proposed Development will appear in the further middle distance, flanked and contained by the closer-situated Red Moss turbines.

While these will form a fairly intrusive element to the setting of the Earney Hillock cairn through the extended screen of turbines in the foreground and middle ground, the bulk of the adverse impact is judged to derive from the more closely set and dominating Red Moss turbines and not the Proposed Development.

The cumulative impact of adding the Proposed Development to this baseline would see the expanse between the two Red Moss turbines filled by an additional two turbines, neatly contained between the two, while the overall arc of closely set turbines would remain relatively narrow.

The group of turbines would not intervene directly between the asset and the potentially significant intervisible Stemster long cairn (Asset 9), and it is judged that it will not materially exceed the predicted overall effect for the Proposed Development itself.

Therefore, it is judged that the cumulative impact would be Low, with an overall Minor adverse level of cumulative effect, which is not significant. This would not result in in a significant adverse impact upon the asset's setting in terms of NPF4.

Ring Hillock cairn (Asset 46)

Ring Hillock cairn derives much of its significance in relation to setting from its expansive outward views and potential intervisibility with other significant prehistoric funerary monuments within the surrounding area.

The operational and consented wind farms in views to the southeast overlooking the Proposed Development from the asset form two extensive but distant and low-lying bands, the northern one comprising the Beatrice, Cogle Moss, Achairn, Wathegar, Wathegar Two, Flex Hill (Bilbster), Camster II, Burn of Whilk and Camster developments, and the southern band comprising the more dispersed Golticlay, Boulfruich, Tacher A, B and C, and Bad a' Cheo developments (Figures 10-19a to 10-19e).

These turbines will theoretically be visible from full height, hub height and extreme blade tips above intervening ridgelines. In combination with these, the Proposed Development will not extend the visible horizontal extent of wind turbines as they will appear in front of the northern band, and the distant turbines are considered to be well

outwith the extent of the setting of the asset. It is judged therefore that there will be a negligible cumulative impact as a result, and no overall cumulative effect.

With regard to a potential future cumulative baseline, the in-planning Watten wind farm will appear in front of the Golticlay turbines, but at such a distance that there is not considered to be much impact to the overall cumulative baseline in combination with the Proposed Development.

The Proposed Development in combination with the in-scoping Red Moss turbines, will be visible as a closely-set but contained group of turbines in the middle distance from the asset, framing a distant view of the northern band of turbines if visible at all beyond the intervening stands of commercial forestry and intervening ridgelines.

There is considered to be a Low cumulative impact and overall Minor adverse cumulative effect which is not considered significant. This would not result in in a significant adverse impact upon the asset's setting in terms of NPF4.

10.6 Residual Effects and Conclusions

10.6.1 Proposed Mitigation/Monitoring

National planning policies and planning guidance as well as local planning policies require that account be taken of potential effects upon heritage assets by proposed developments and that, where possible, such effects are avoided. Where avoidance is not possible, effects should be minimised or offset.

The planning 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.

The Proposed Development has been subject to an evolving design process whereby environmental, planning, technical and commercial constraints have been given due consideration (see Chapter 3 Description of Development for further details).

Where significant adverse environmental effects (i.e. those that are **Major** or **Moderate**) are identified in the assessment process, measures to mitigate these effects are put forward in the form of recommendations. No significant direct effects upon known heritage assets are predicted. In line with best practice, mitigation for direct impacts is set out below.

Significant **Moderate** adverse settings impacts have been identified for the Scheduled Stone Lud (Asset 47). Beyond the steps taken during the iterative design process to minimise impacts upon the settings predicted, there are no direct measures that can be applied to further mitigate effects; on this basis measures to offset these impacts may be proposed.

Twelve non-designated heritage assets (Assets 70, 96 and 104-113) have been identified within the Proposed Development Site that have the potential to be directly impacted by the construction of the Proposed Development.

Of these, only linear field boundaries and a quarry fall within the construction footprint, however the others are located within such close proximity that inadvertent impacts through plant movement or and other construction activities have the potential to directly impact upon them.

In the first instance it is recommended that non-linear heritage assets in close proximity to the Proposed Development footprint (Assets 70c, 70d, 96, 104, 105 and 107) are demarcated prior to construction, and the proposed track and infrastructure footprint micro-sited to avoid direct impacts where possible.

If micro-siting is not possible and direct impacts are unavoidable, these impacts will be offset through works to preserve the assets by record under archaeological watching brief conditions. The remaining Negligible importance non-linear assets which fall within the construction footprint should be breached under archaeological watching brief conditions.

Through the implementation of the above outlined mitigation, direct impacts on known assets would be avoided or would, at worst, result in Negligible levels of effect and would be offset. Furthermore, it is judged that there is potential for hitherto unknown sub-surface archaeological remains to survive within the Proposed Development Site.

An archaeological watching brief is proposed to be undertaken on all ground-breaking works within 50m of recorded heritage assets, and on a proportion of the remaining ground-breaking works.

The purpose of such a watching brief would be to determine the presence, character, extent and significance of any currently unknown archaeological features or artefacts that may be disturbed by ground-breaking works.

Further mitigation measures, dependent on the results of such works, may be required. The extent and location of such works will be agreed with the Highland HET through a Written Scheme of Investigation (WSI) in advance of construction.

Public benefit proposals in relation to the Proposed Development are also presented in line with NPF4. Scotland's Delivery of Public Benefit and Social Value Guidance for Archaeology in the Planning Process (Mann 2023), adopted as best practice by the Association of Local Government Archaeologists Scotland (ALGAO Scotland), outlines possible site-specific activities that can be undertaken.

To a degree the scope of such activities is dependent on the results of the archaeological works undertaken on the Proposed Development Site, but the approach should be flexible and open to adaptation based on results of the archaeological fieldwork and would need to be agreed by the client, HET and archaeological contractor.

Should significant remains be uncovered, site open days and archaeological tours could be undertaken, with legacy items such as heritage interpretation boards installed. Should there be no significant archaeological remains uncovered, the public benefit items could focus on nearby local heritage items and events, such as the historic draining of Loch Durran.

Proposed public benefit measures could also focus on the Scheduled Stone Lud (Asset 47). Enhancement of the understanding of the asset in the form of heritage interpretation could enable greater appreciation of the asset in its current setting. Such interpretation could be presented digitally.

Such measures would offer compensatory mitigation to offset the predicted adverse effects upon setting by the Proposed Development. Any such compensatory mitigation should be developed in consultation with the client, HES, Highland Council HET and the archaeological contractor.

No direct effects are anticipated during decommissioning, provided works are contained within the Proposed Development's construction footprint. Demarcation of known heritage assets in close proximity to the footprint will prevent inadvertent impacts to the remaining heritage resource.

All operational and cumulative effects upon the settings of designated assets will be reversed with the removal of the turbines following decommissioning, leading to Neutral effects.

10.6.2 Summary and Statement of Significance

This assessment has considered the potential for direct and settings effects on the cultural heritage resource within the Proposed Development Site and surrounding Study Areas during the construction, operation and decommissioning of the Proposed Development.

Several non-designated heritage assets (Assets 70a-70d, 96, 104-108 and 110-112) identified within the Proposed Development Site are considered to have the potential to be directly impacted upon during the construction phase of works. There is also considered to be good potential for as-yet unknown archaeological remains to survive within the Proposed Development Site.

The proposed mitigation measures, which include the demarcation of heritage assets prior to construction works, micro-siting of infrastructure, implementation of an archaeological watching brief and the recording of any archaeological remains impacted directly, will ensure that the level of effect upon these remains will not exceed Negligible, which is not significant.

A potentially significant Moderate adverse effect upon the setting of the Scheduled Stone Lud (Asset 47) has been predicted. Minor adverse and Neutral effects upon the setting of all other designated assets have been predicted and are not considered significant.

Whilst there would be a potentially significant effect upon the settings of the Stone Lud (Asset 47) asset, the main elements of the asset's setting would still be appreciable and the ability to understand it would not be significantly diminished.

On this basis, the key characteristics of setting would not be materially adversely affected; there would not be an adverse impact upon the integrity of the asset's setting. All operational effects upon the settings of designated assets will be reversed with the removal of the turbines following decommissioning.

Potential cumulative effects have been considered for both the existing cumulative baseline and the potential future cumulative baseline. No significant cumulative effects are considered likely with the addition of the Proposed Development to the existing cumulative baseline.

In a potential future cumulative baseline, which includes in-scoping and in-planning developments, a potentially significant Moderate adverse effect has been identified with regard to cumulative effects on the Scheduled Stone Lud (Asset 47), but similarly to the operational effects upon this asset, the key characteristics of the asset's setting would largely be preserved.

In line with NPF4's Policy 7o (Scottish Government 2023, 47), proposals for public benefit activities relating to cultural heritage have been included. The exact scope for such

activities will be dependent on the fieldwork results and in consultation with the client, HET, the archaeological contractor, and – if relevant – HES.

10.7 References

10.7.1 Bibliographic References

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10.7.3 Aerial Photography and Satellite Imagery References

Table 10-8: Consulted Historical Aerial Photographs (NCAP)

Date	Sortie	Frame	Location
02 March 1941	M/104/NLA/006	0303	Durran Mains; Bower;
02 March 1941	M/104/NLA/006	0304	Hoy; Olrig
02 March 1941	M/104/NLA/006	0305	Bower
07 May 1988	ASS/60988	0010	Red Moss; Bower

Date	Sortie	Frame	Location
07 May 1988	ASS/60988	0011	Hoy; Olrig
07 May 1988	ASS/60988	0012	Ha' of Durran; Olrig

Table 10-9: Consulted Current and Historical Satellite Imagery

Date	Layer Image Copyright	Application Used for Viewing
2003	2023 Getmapping plc	Google Earth Pro (Desktop Version 7.3)
1 May 2012	Microsoft (UC-G)	ESRI Living Atlas Wayback Machine
20 September 2016	2023 Maxar Technologies	Google Earth Pro (Desktop Version 7.3)
14 May 2019	2023 CNES/Airbus	Google Earth Pro (Desktop Version 7.3)
8 September 2019	2023 CNES/Airbus	Google Earth Pro (Desktop Version 7.3)
25 April 2021	2023 CNES/Airbus	Google Earth Pro (Desktop Version 7.3)
29 June 2021	Maxar (WV02)	ESRI Living Atlas Wayback Machine