



Technical Appendix

Drummarnock Wind Farm

Technical Appendix 10-1: Historic Environment
Assessment

Drummarnock Wind Farm Limited

July 2024



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Glossary of Terms

Term	Description
Heritage Asset	A physical element of the historic environment – a building, monument, site, place, area or landscape identified as having cultural significance.
Cultural Significance	The sum of the value(s) of receptors (heritage assets) is referred to in historic environment policy as their 'significance'. To avoid confusion with the EIA concept of the 'Significance of Effect' upon receptors, the significance of heritage assets will be termed their 'cultural significance'.
Sensitivity	A measure of how likely the cultural significance of a heritage asset is to be affected by a specific proposed change. This can relate to physical change (e.g. change/removal of historic fabric) or setting change (e.g. the introduction of a novel type of development or land use within the setting of a heritage asset that affects the contribution setting makes to the cultural significance of an asset).
Designated Heritage Asset	Heritage assets that meet the relevant designation criteria provided in Annexes 1-6 of Historic Environment Policy for Scotland or, in the case of World Heritage Sites, are of outstanding universal value and meet one of the published criteria.
World Heritage Site	Areas the United Nations Educational, Scientific and Cultural Organisation have identified as having importance to present and future generations of humanity, meet the criteria for Outstanding Universal Value and having an adequate management plan to protect its cultural significance.
Non-Designated Heritage Asset	Buildings, monuments, sites, places, areas or landscapes identified as having a degree of significance meriting consideration in planning decisions because of their heritage interest but which do not meet the criteria for designation.
Scheduled Monument	A heritage asset included on the schedule of monuments compiled under the Ancient Monuments and Archaeological Areas Act 1979, as amended. It is a criminal offence to undertake works affecting a scheduled monument without written consent from Historic Environment Scotland (HES), on behalf of Scottish Ministers.
Listed Building	A building of special architectural or historic interest included in the statutory list compiled under the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997, as amended ('the 1997 Act'). Any building or structure or any part of a building, (or any building or structure falling within the curtilage of a listed building and dating prior to 1948) may be listed. Listed status protects a building against unauthorised demolition, alteration or extension. It ensures that its special interest is considered when proposals are put forward which affect its character or appearance.
Conservation Area	An area of special architectural or historic interest designated by local planning authorities under powers delegated by the 1997 Act, the character or appearance of which it is desirable to preserve or enhance.
Inventory Gardens and Designed Landscapes	A designed landscape included in the HES inventory of gardens and designed landscapes. Entry on the inventory recognises its national importance; it confers no statutory protection but can help to inform management decisions and is a material consideration in planning policy.
Inventory of Historic Battlefields	A designated landscape included in the HES inventory of historic battlefields. Entry on the inventory recognises its national importance; it confers no statutory protection but can help to inform management decisions and is a material consideration in planning policy.

Term	Description
Special Qualities	The physical features within an inventory historic battlefield area and can include upstanding buildings and memorials, as well as known or potential areas of archaeological remains and landscape features such as enclosures, defensive banks and ditches that might played a significant role in the battle.
Key Landscape Characteristics	The terrain of a battlefield which influenced how and where it is fought. This landscape context helps to understand and appreciate the battlefield. It can also provide a sense of place, contributing to remembrance and commemoration of the battle.
Setting	'Setting' is the way the current surroundings of a heritage asset or place contribute to how it is understood, appreciated and experienced. Setting often extends beyond the property boundary or 'curtilage' of an individual heritage asset into a broader landscape context. Both tangible and less tangible elements can be important in understanding the setting. Less tangible elements may include function, sensory perceptions or the historical, artistic, literary and scenic associations of places or landscapes.
Zone of Theoretical Visibility	A computer-generated tool to identify theoretical extent of visibility of a development. The elevation(s) of a development is tested against a bare earth 3D terrain model which does not feature buildings, vegetation or other boundaries which may influence the visibility of a development. In open terrain where there are few intervening features, a ZTV provides a reasonable representation of visibility. However, visibility from lowland rural areas is often affected by tree and hedgerow cover; whilst in developed areas, visibility is usually determined by intervening buildings. A ZTV therefore presents a worst-case visibility scenario.
Muirburn	The intentional and controlled burning of moorland vegetation, particularly heather, to encourage new growth.

List of Abbreviations

Abbreviation	
ACoW	Archaeological Clerk of Works
CIfA	Chartered Institute for Archaeologists
Discovery Excav. Scot.	Discovery Excavation Scotland
EIA	Environmental Impact Assessment
GDL	Garden and Designed Landscape
HEA	Historic Environment Assessment
HER	Historic Environment Record
HES	Historic Environment Scotland
OS	Ordnance Survey
OUV	Outstanding Universal Value
PCHIA	Principles of Cultural Heritage Impact Assessment
ICOMOS	International Council on Monuments and Sites
SNH	Scottish Natural Heritage
SC	Strirling Council
UNESCO	The United Nations Educational, Scientific and Cultural Organization
ZTV	Zone of Theoretical Visibility

1 Executive Summary

This historic environment assessment (HEA) has been prepared to accompany the proposal for a new wind energy development at Drummarnock (hereafter the 'Proposed Development') and forms a technical appendix to the Environmental Impact Assessment (EIA) Report chapter.

Land use within the Proposed Development Site comprises semi-improved agricultural fields and enclosed heather moorland managed as a grouse moor and rough grazing.

A total of 29 non-designated heritage assets have been identified within the Proposed Development Site.

These are characterised by the remains of pre-Improvement Era farmsteads, rig and furrow cultivation, a shieling, and limestone quarries with associated limekilns. Evidence of historic land use on the enclosed moorland within the Proposed Development Site is limited to that of seasonal grazing and sporting activities.

This exposed and currently unproductive environment suggests there is a negligible to low potential for previously unrecorded buried archaeological remains.

Heritage assets within the Inner and Outer Study Areas are characterised by evidence of prehistoric activity from the Bronze Age to the Iron Age, including Bronze Age funerary and ritual monuments, later prehistoric settlements, such as Iron Age hillforts and duns. The conurbation of Stirling, including Stirling Castle is located within the Outer Study Area.

Also included in the historic environment baseline are the remains of pre-Improvement farmsteads and townships, post-medieval buildings, some of which are listed buildings, and gardens and designed landscapes associated with country house estates.

No direct physical effects on heritage assets have been identified resulting from the construction of the Proposed Development.

A number of designed heritage assets may experience setting change as a result of the operation of the Proposed Development.

These changes have the potential to affect the contribution their current setting makes to how they are experienced in the landscape. The elements of their setting which contribute most to their cultural significance and the evidential and historical value of their physical remains will not be affected.

Potential direct effects resulting from setting change have been identified for four scheduled monuments of high importance and one non-designated heritage asset of low importance (Buckie Burn Sheiling-Hut; SC HER Ref: 3379).

Changes to the setting of: the King's Yett, Cairn; Dundaff Hill, Mound and Dundaff Hill, Enclosure; Stirling Castle; and, Buckie Burn Sheiling-Hut (SM2580; SM6553; SM7131; SM90291; SC HER Ref: 3379) will affect the way elements of their settings contribute to how they are experienced in the landscape but have not been assessed as resulting in a significant effect for the purposes of EIA.

No significant effects for the purposes of the EIA have been identified.

2 Introduction

2.1 Project Background

This historic environment assessment (HEA) has been prepared to accompany the proposal for a new wind energy development at Drummarnock (hereafter the 'Proposed Development') by Drummarnock Wind Farm Limited (hereafter 'the Applicant').

The Proposed Development Site is located c. 10km south-west of Stirling, in the Fintry, Gargunnock and Touch Hills centred on National Grid Reference NS 74314 87247. The Proposed Development Site lies within the Stirling Council (SC) administrative area.

The location of the Proposed Development is shown on Figure 10-1 in EIA Report Volume 2: EIA Main Text. For the avoidance of doubt, all Figure references, unless explicitly indicated otherwise, are internal references to images within this report.

The Proposed Development is subject to The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (the 'EIA Regulations'). The application for planning permission under the Town and Country Planning (Scotland) Act 1997, as amended, will be accompanied by an EIA Report.

This HEA forms an appendix to the EIA Report to fulfil the requirements of the NPF4, the Historic Environment Policy for Scotland (HEPS), and Planning Advice Note 2/2011 (PAN 2) at national level, and Stirling Council (SC) Local Development Plan (2018) (see Annex A: Legislation and Policy Context)

2.2 The Proposed Development

2.2.1 Description

The Proposed Development comprises four wind turbines, with a maximum blade tip height of 180m.

Permanent foundations to support each wind turbine will be created alongside associated crane hardstandings at each turbine location and new access track. There will also be up to six watercourse crossings alongside a network of underground cables will also be required.

Other key elements of the Proposed Development include: a control building and substation, temporary construction compound, laydown area(s) and car park(s), up to four borrow pits.

2.2.2 Access

The route for delivery of turbine components to the Proposed Development Site is likely to be from Junction 9 of the M9. The proposed route will take the A872 northbound onto the Pirnhall Road, before passing south over the M9 on the New Line Road and travelling along approximately 6km of minor roads to reach one of the two points of entry presented in the EIAR for the Proposed Development Site.

The Proposed Development includes the provision for 6.59km of new access tracks, which includes two onsite access options (Option A and Option B). However, only one

of these onsite access options will be constructed, and therefore of the 6.59km of proposed new tracks, a maximum of up to 5.8km would be constructed, dependent upon the access option utilised. To ensure a robust and conservative assessment, the EIA has assessed the full 6.59km to support the full appraisal of both access options.

2.2.3 Construction

It is estimated that it will take up to approximately 12 months to construct the Proposed Development. Construction works will include the following main activities:

- Upgrades to the existing access track;
- Establishment of up to four borrow pits;
- Construction of temporary construction compounds;
- Formation of temporary construction compound for grid operator;
- Construction of tracks, passing places and watercourse crossings;
- Construction of six culverts under tracks to facilitate drainage and maintain existing hydrology;
- Construction of turbine foundations;
- Excavation of trenches and cable laying adjacent to site tracks;
- Construction of substation compound;
- Construction of up a control buildings;
- Movement onto Proposed Development Site and delivery and erection of wind turbines;
- Commissioning of the wind turbines and control building; and
- Restoration of areas disturbed during construction including re/planting.

2.2.4 Operation

The expected operational life of the Proposed Development is up to 40 years from the date of commissioning. The main components of the Proposed Development during operation will comprise:

- Four turbines each with a maximum tip height of 180m), and positions to be subject to a micrositing allowance of 50m;
- It is anticipated that all turbines will be fitted with visible aviation warning lights in accordance with the requirements of the Civil Aviation Authority (CAA);
- Crane hardstandings;
- Six new watercourse crossings and associated infrastructure;
- 6.59km of proposed access tracks, of which up to 5.8km is anticipated to be constructed, dependent upon the access option utilised;
- Onsite underground electrical cables and cable trenches; and
- Control building and substation.

Full details of the Proposed Development are provided in EIA Report Volume 2 Chapter 3: Description of the Development.

2.2.5 Decommissioning

Decommissioning at the end of the Proposed Development's lifespan is anticipated to involve the following activities:

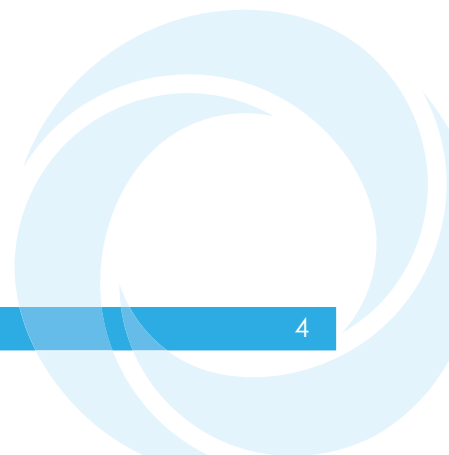
- Dismantling and removal of turbines and electrical equipment;
- All underground cables will be left in place and de-energised.
- Restoration of peat and topsoil with reseeded of the turbine areas.
- Hardstanding and tracks will be left in-situ unless their removal is required and allowed to grass over or will be covered with soil and reseeded.

2.2.6 Aims and Objectives

The aim of this HEA is to identify the baseline conditions for the historic environment and assess the potential effects of the Proposed Development on the historic environment. This will be achieved by:

- Identifying heritage assets within the Proposed Development Site, and those within the Inner and Outer Study Areas with the potential to experience effects, including as a consequence of setting change;
- Establishing the cultural significance of those heritage assets identified as susceptible to change, including any contribution made by their setting; and
- Assessing the value (importance) of those heritage assets included in the baseline.
- Identifying the potential for change to those heritage assets and assess impacts as a result of the Proposed Development.

The HEA includes consideration of known heritage assets and the potential for previously unrecorded heritage assets, including buried archaeological remains, and, therefore fulfils the purpose of an archaeological desk-based assessment, within the meaning of the Chartered Institute for Archaeologists (CIfA) Standard and Guidance CIfA (2020) and a heritage statement.



3 Methodology

3.1 Introduction

This chapter sets out the approach to the HEA, and the sources consulted in compiling and understanding the baseline data to undertake the assessment. For the purposes of the assessment, the historic environment is held to be; “...the physical evidence for human activity that connects people with place, linked with the associations we can see, feel and understand” (Scottish Government 2014, p.2).

Its constituent parts are known as ‘heritage assets’ which are synonymous with ‘cultural heritage assets’, ‘historic assets’, ‘sites’ or ‘monuments’.

These can be tangible features, buildings, or places or intangible stories, traditions and concepts (Historic Environment Scotland (HES) and Scottish Natural Heritage (SNH) 2018) that provide physical evidence of past human activity and hold sufficient value (i.e. cultural significance) to this and future generations to merit consideration in the planning system (HES and SNH 2018, p.175).

This assessment therefore focuses on if, and how, the Proposed Development will change the cultural significance of heritage assets within and around it.

3.2 Guidance

This report has been prepared in accordance with the principles contained following appropriate guidance:

- Code of Conduct: professional ethics in archaeology (Chartered Institute for Archaeologists (CIfA), 2022);
- Standard and guidance for historic environment desk-based assessment CIfA (2020);
- Managing Change in the Historic Environment Guidance Notes – setting (hereafter referred to as the HES setting guidance) (Historic Environment Scotland (HES), 2020a);
- Managing Change in the Historic Environment Guidance Notes – gardens and designed landscapes (HES 2020b);
- Managing Change in the Historic Environment Guidance Notes – historic battlefields (HES 2020c);
- Managing Change in the Historic Environment Guidance Notes – World Heritage (HES 2020d);
- Designation Policy and Selection Guidance (HES 2020);
- Planning Advice Note 2/2011: Planning and Archaeology (Scottish Government 2011);
- Environmental Impact Assessment Handbook (particularly the framework for Cultural Heritage Impact Assessment provided in Appendix 1; hereafter this guidance is referred to as the EIA Handbook) (HES and SNH 2018); and
- Principles of Cultural Heritage Impact Assessment (PCHIA) in the UK (CIfA, Institute of Historic Building Conservation and Institute of Environmental Management and Assessment 2021).

3.3 Study Areas and Data Gathering

3.3.1 Study Areas

Physical effects to the cultural significance of heritage assets are assessed within the Proposed Development Site only. Effects arising from setting change are assessed for those assets within the Proposed Development Site and using two study areas.

These study areas are based on the bare earth modelling of the Proposed Development's Zone of Theoretical Visibility (ZTV) and an understanding of the distance over which significant effects arising from setting change are considered likely. The two study areas are:

- **Inner Study Area:** consisting of the land beyond the Proposed Development's outermost turbines to a distance of 5km from it. All heritage assets located within the Inner Study Area have been considered for the potential for effects arising from setting change; and
- **Outer Study Area:** consisting of land between 5km (Inner Study Area) and 10km. Designated heritage assets lying within this area have been considered for the potential for effects due to setting change.

Consideration has also been given to the potential for setting change to heritage assets within the ZTV, beyond 10km.

The Proposed Development Site boundary and the extent of the Inner and Outer Study areas are identified on Figures 10-1, 10-2 and 10-3 in EIA Report Volume 2.

3.3.2 Sources

In line with best practice, the following publicly accessible sources of primary and secondary information were used in preparation of the baseline and inform the assessment:

- HES spatial datasets and database for designated heritage assets comprising:
 - world heritage sites;
 - scheduled monuments;
 - listed buildings;
 - conservation areas;
 - Inventory Gardens and Designed Landscapes; and
 - Inventory Historic Battlefields;
- SC Historic Environment Record (HER) data (received 6 February 2023);
- SC conservation area information, including conservation area appraisals where available;
- HES Canmore database (the National Record of the Historic Environment);
- HES Historic Land-use Assessment (HLA) data;
- Historic Ordnance Survey mapping (principally First and Second Edition 25-inch and 6-inch to a mile mapping where available for the Proposed Development Site) and other published historic mapping held in the National Library of Scotland (NLS) and available online;
- Aerial photographs (oblique and vertical) held by the National Collection of Aerial Photography (NCAP) available online;

- Available reports from recent archaeological work undertaken in the area ('grey literature');
- Relevant archive material held by SC, HES, NLS, registers of Scotland available online;
- Publicly accessible LiDAR data;
- Visualisations and 3-D turbines modelled and viewed in relevant software; and
- Findings of other relevant topics identified in Chapter 5: Landscape and Visual, Chapter 8: Hydrology, Geology and Hydrogeology and Chapter 9: Noise of the EIA Report Volume 2 for the Proposed Development.

In addition to the sources identified above, the Scottish Archaeological Research Framework (ScARF 2012), which provides a national overview by period, was used to inform the assessment of the cultural significance and importance of those heritage assets identified in the baseline.

3.3.3 Field Survey

A walkover survey of the construction footprint, maximum micro-siting allowance, and selected heritage assets within the Proposed Development Site and site visits to selected heritage assets in the Inner and Outer Study Areas were undertaken in April and May 2023 to inform the assessment. Weather conditions during these surveys were good, with excellent visibility.

The walkover survey allowed for the verification of known heritage assets, confirming their interpretation, location, and likely sensitivity to change, and informed the assessment of potential effects on those assets. Selected heritage assets beyond the Proposed Development Site were also visited to confirm their setting and inform the assessment of change to that setting.

The selection of heritage assets beyond the Proposed Development Site was informed by the ZTV and professional judgement in relation to the likely sensitivity to setting change of heritage assets with theoretical visibility or the potential for in-combination views that contribute to their cultural significance.

Selected photographs from the walkover survey and site visits are included in this HEA.

3.4 Assumptions and Limitations

The assessment has utilised a range of sources on the area's historic environment. Much of this is necessarily secondary information compiled from a variety of sources (e.g. HER data and grey literature reports). It has been assumed that this information is reasonably accurate unless otherwise stated.

Given their locations, some heritage assets with intervisibility with the Proposed Development were not the subject of a site visit due to limited access or ground conditions, however, desk-based sources and visualisations were sufficient to identify potential effects due to setting change.

The potential for previously unrecorded heritage assets, including buried archaeological remains, has been considered in relation to the pattern and significance of known heritage assets (drawn from the SC HER and Canmore data and a review of historic mapping and available digital aerial imagery) within the vicinity of

the Proposed Development Site, and land use history within it, to understand the archaeological potential.

Non-intrusive or intrusive archaeological investigations, such as geophysical survey and archaeological trial trenching, have not been undertaken to inform the historic environment baseline, as the sources identified above are sufficient to identify the potential for previously unrecorded buried archaeological remains, within the Proposed Development Site and the assessment of any likely significant effects.

Whilst some information gaps are inevitable, given the buried nature of archaeological remains, it is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant environmental effects on cultural heritage.

A precautionary approach has been applied, based on the available information and the professional experience and judgment of the project team, to ensure that all likely significant effects have been assessed and reported.

For the avoidance of doubt, when any asset is identified as being of 'uncertain' importance, a precautionary approach would be applied, and the effect reported as potentially significant. However, this has not been necessary in this instance.

3.5 Approach to Assessment

The heritage assets forming the baseline were subject to a high-level analysis to identify those that are sensitive to the Proposed Development and required detailed assessment. Those heritage assets identified as being likely to experience effects have been subject to a full assessment undertaken in line with the six steps set out in PCHIA:

1. Understanding heritage assets:
 - a. describe the heritage asset;
 - b. ascribe heritage (cultural) significance; and
 - c. attribute importance;
2. Evaluating the consequences of change:
 - a. understand change;
 - b. assess impact; and
 - c. weigh the effect.

3.5.1 Description

A factual description of each heritage asset is provided including, where relevant, their location, form, fabric, condition, etc. As proportionality is key, the information presented is focused on that which is relevant to understanding the cultural significance of the heritage asset, especially those elements that might be affected by the Proposed Development.

3.5.2 Ascribing Cultural Significance

This assessment seeks to identify the cultural significance of the heritage assets within the historic environment baseline to assess the likely impact of the Proposed Development on cultural heritage and the recommendations for any appropriate mitigation to reduce effects.

The cultural significance that makes heritage assets important can be articulated in various ways. The HES (2020e) Designation Policy and Selection Guidance sets out how Scotland's historic sites and places are assessed to determine whether their cultural significance is of national importance.

One approach to assessing cultural significance in any circumstance (designated or non-designated) is to adjust these criteria to reflect the relative importance of the heritage asset, from national to local. However, as each heritage asset type (monument, historic building etc) is assessed against different designation criteria this approach is not consistent, which can make it difficult for the reader to follow.

A more consistent and easily understandable approach draws upon the heritage values referenced by the Historic Environment Policy for Scotland (HES 2019), which are drawn from The Burra Charter (Australia International Council on Monuments and Sites (ICOMOS) 2013a).

These values are detailed in the Australia ICOMOS Understanding and Assessing Cultural Significance Practice Note (Australia ICOMOS 2013b) and comprise:

- **Evidential value:** This refers to the information content of a place and its ability to reveal more about an aspect of the past through examination or investigation of the place, including the use of archaeological techniques. The relative scientific value of a place is likely to depend on the importance of the information or data involved, on its rarity, quality or representativeness, and its potential to contribute further important information about the place itself or a type or class of place or to address important research questions;
- **Historical value:** This is typically either illustrative or associative. It is intended to encompass all aspects of history; for example, the history of aesthetics, art and architecture, science, spirituality, and society. It therefore often underlies other values. A place may have historic value because it has influenced, or has been influenced by, an historic event, phase, movement or activity, person or group of people. It may be the site of an important event. For any place, the significance will be greater where the evidence of the association or event survives at the place, or where the setting is substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of such change or absence of evidence;
- **Aesthetic value:** This refers to the sensory and perceptual experience of a place; that is, how we respond to visual and non-visual aspects such as sounds, smells and other factors having a strong impact on human thoughts, feelings and attitudes. Aesthetic qualities may include the concept of beauty and formal aesthetic ideals. Expressions of aesthetics are culturally influenced; and
- **Social / Spiritual value:** This refers to the associations that a place has for a particular community or cultural group and the social or cultural meanings that it holds for them. Spiritual value refers to the intangible values and meanings embodied in or evoked by a place which give it importance in the spiritual identity, or the traditional knowledge, art and practices of a cultural group. Spiritual value may also be reflected in the intensity of aesthetic and emotional responses or community associations and be expressed through cultural practices and related places.

3.5.3 The Contribution of Setting to Cultural Significance

The ICOMOS heritage values are a way of transparently and consistently articulating the cultural significance of any heritage asset, including any contribution made by setting to that cultural significance.

The HES setting guidance identifies that setting is the way the surroundings of a heritage asset or place contribute to how it is understood, appreciated, and experienced in the present landscape (HES 2020a, p.5).

All heritage assets have a setting, but the contribution that this makes to their cultural significance varies in line with the location, form, function and preservation of the asset and its surroundings.

Setting can be integral to the cultural significance of a heritage asset (contributing to one of more of its heritage values or their appreciation), therefore a change in an important element of an asset's setting can equate to a direct impact to its cultural significance. Equally, where setting does not contribute to a heritage asset's cultural significance, no effect can result from setting change.

The contribution made by setting to a heritage asset's cultural significance is set out discursively.

3.5.4 Ascribing Importance

Heritage assets may derive their cultural significance from one or more of the above heritage values, but a lack of interest in one or more of these values does not indicate a lower level of importance, just that their interest lies elsewhere. The above heritage values help in understanding cultural significance of a heritage asset, but do not determine the level of that significance (i.e. 'importance').

The ICOMOS heritage values (discussed above) can help explain a heritage asset's cultural significance, but they do not explain how important (e.g. high, medium, low) the significance of the asset is. Establishing the importance of a heritage asset is a key stage of the assessment process as it influences the way in which decisions are made during the development of a proposal as well as the weight to be given it by the decision-maker. Importance is determined using professional judgement alongside an understanding of local, regional, and national historic environment research objectives and, where appropriate, the use of the designation criteria for heritage assets. The criteria used to inform the assessment of importance of heritage assets are identified in Table A10-1.

Table A10-1 Heritage Asset Importance Criteria

Importance	Criteria
High	Designated heritage assets. Non-designated heritage assets that meet the criteria for statutory designation, or an equivalent level of cultural significance.
Medium	Non-designated heritage assets of regional or regional/local value.
Low	Non-designated heritage assets of local value.
Very Low	Non-designated heritage assets of less than local or other value.
Uncertain	The heritage value of the heritage asset could not be fully ascertained.

3.5.5 Evaluating the Consequences of Change

A heritage asset's sensitivity to change does not automatically equate to its importance. It varies depending on the nature of a heritage asset's cultural significance, the contribution that setting makes to that cultural significance, and the character of the proposed development and the way in which it interacts with that cultural significance.

Unless otherwise stated, all heritage assets within the Proposed Development Site have been assumed to be of high sensitivity to physical change as their cultural significance is derived primarily from their evidential and historic value (form and fabric) which will be diminished or lost if physically changed.

Sensitivity to setting change is variable and has been established based on an understanding of the contribution made by setting to a heritage asset's cultural significance and the likely interaction of the Proposed Development with that contribution.

Sensitivity to setting change has been articulated by describing the way a heritage asset's setting contributes (or not) to its cultural significance (or understanding that significance), with reference to HES setting guidance, and how that contribution may be changed by the Proposed Development.

3.5.6 Assessment of Potential Effects

Types of Effects

This assessment considers the potential effects associated with the construction and operation of the Proposed Development as detailed below. Effects to heritage assets are described in terms of the extent to which the Proposed Development will degrade or enhance the heritage assets' cultural significance using professional judgment.

Impacts can be adverse or beneficial, temporary or permanent, avoidable or unavoidable, individual or cumulative, amongst many factors. The following effects have been assessed in full:

- Direct effects resulting from physical change to heritage assets within the Proposed Development Site. Heritage assets beyond the Proposed Development Site are not at risk of physical change as a result of the Proposed Development;
- Direct effects to designated and non-designated heritage assets that are identified as being sensitive to setting change. These effects are considered in relation to different study areas identified above; and
- Cumulative operational effects as a result of setting change (cumulative physical effects are not considered likely given the nature of the Proposed Development).

Physical Effects

Direct physical effects to heritage assets occur when, as a result of a development, the fabric of a heritage asset is removed or damaged; this will be permanent and generally occurs during the construction phase. This risk exists in relation to recorded heritage assets as well as previously unrecorded heritage assets, including buried archaeological remains.

Indirect physical effects can also occur at any stage of a development to heritage assets which lie outside the Proposed Development Site.

For instance, adverse impacts can include changes in groundwater levels which can affect the preservation of waterlogged archaeological remains, or damage to buildings and structures from vibration arising from construction plant and machinery. These adverse effects are likely to be permanent.

To identify heritage assets sensitive to physical change an intersection analysis was run between known heritage assets and the development footprint. Consideration has also been given to the potential to encounter further hitherto unrecorded heritage assets, including buried archaeological remains.

Setting Change

Effects related to setting change are direct and result from how a development proposal alters a heritage asset's setting in a way which affects its cultural significance or how it is perceived.

Such changes are often visual, but can also relate to disruptions of historical, functional or symbolic relationships (including intervisibility between heritage assets or historic patterns of land use) or sensory factors such as noise, odour or emissions.

Indirect impacts on setting can also occur away from the proposal, such as changes in traffic around a heritage asset. This type of impact can occur at any stage of development and may be temporary, permanent or reversible.

To identify heritage assets whose cultural significance is potentially sensitive to setting change a high-level assessment of all known heritage assets that intersected with the ZTV was undertaken. Heritage assets outside of the ZTV were also reviewed to see if in-combination views that could affect their cultural significance were considered possible.

A list of designated heritage assets within the Inner Study Areas and with the exception of listed buildings those assets beyond the Outer Study Area whose setting may experience change, can be found in Annex B: Designated Heritage Assets Assessment Tables. This list has been used to establish the baseline data to inform the scope of the assessment of potential effects to heritage assets due to setting change.

Given the number of listed buildings within the Outer Study Area (757), the majority of which are located within the City of Stirling and its conurbation, and that all 757 have been screened out for further assessment, listed buildings identified within the Outer Study Area have not been included in Annex B.

Cumulative Effects

Impacts of a cumulative nature can relate to the physical fabric or setting of heritage assets. This can be a result of impact interactions between different impacts of a proposed development or in-combination with impacts of other schemes.

Alternatively, they may be additive impacts from incremental changes caused by a proposed development together with other extant schemes or those already in the planning system.

This assessment considers the potential effects to the cultural significance of heritage assets against a baseline that includes existing, consented or within the planning system wind farms, in line with the schemes agreed for inclusion in the cumulative assessment.

3.5.7 Understanding Change

In line with the PCHIA guidance and EIA Handbook, the way in which the Proposed Development may change the cultural significance of a heritage asset, and whether that change is temporary or permanent, has been clearly articulated with explicit reference to the heritage value(s) affected.

Assessing Impact (Magnitude of Change)

Assessment of the impact to a heritage asset's cultural significance as a result of the Proposed Development has been undertaken using professional judgement and an understanding of how the heritage values of that asset that contribute to its cultural significance will be affected.

It is not a measure of the reach or extent of the proposal or the importance of the heritage asset. As per the PCHIA guidance a simple scale is used for assessing an impact and, for transparency, the criteria for this are set out below in Table A10-2.

Table A10-2 : Level of Impact / Magnitude of Change Criteria

Magnitude of Change	Description
Large	Substantial, near total, or total loss of a heritage asset's cultural significance either through physical and/or setting change. Substantial level of change to how that significance is understood, appreciated, or experienced.
Medium	Medium loss or alteration of a heritage asset's cultural significance either through physical and/or setting change. Medium level of change to how that significance is understood, appreciated, or experienced.
Small	Slight loss or alteration of a heritage asset's cultural significance either through physical and/or setting change. Small changes to how that significance is understood, appreciated, or experienced.
None	No change to the cultural significance of the heritage asset, or how that significance is understood, appreciated, or experienced

Level of Effect (Significance of Effect)

In EIA terms the level of effect is typically referred to as the significance of effect. This terminology has deliberately been avoided to prevent confusion with the discussion of cultural significance.

Similarly, the PCHIA term of 'weighting the effect' has been avoided to remove any sense of conflation with weighing of effects in the planning balance – a matter solely for the decision-maker.

The level of the effect has been determined using professional judgement to reflect the importance of the heritage asset using the scaled criteria in Table A10-3 below.

The justification for the significance of effect has been reported clearly. This approach accords with the guidelines for assessment set out in the PCHIA guidance (termed 'weighting the effect') and the EIA Handbook.

A clear statement has been made as to whether an effect is a significant effect in terms of the EIA Regulations based on professional judgement of the available evidence and guided by the description of significance of effect identified in Table A10-3. **Major** and **moderate** effects are considered significant in the context of the EIA Regulations.

Table A10-3: Significance of Effect Criteria

Magnitude of Change	Description
Major	A large magnitude of change (e.g. total or near total loss) to the cultural significance of a heritage asset of medium or high importance.
Moderate	A medium magnitude of change (e.g. substantial loss or alteration) to the cultural significance of a heritage asset of medium or high importance; or a large magnitude of change (total or near total loss) to a heritage asset of low importance.
Minor	A small magnitude of change (slight loss or alteration) to the cultural significance of a heritage asset of medium or high importance; a medium or small (slight to substantial loss or alteration) to the cultural significance of a heritage asset of low importance; or any change to a heritage asset of very low importance.
None	No change to the cultural significance of a heritage asset.

3.5.8 Visualisations

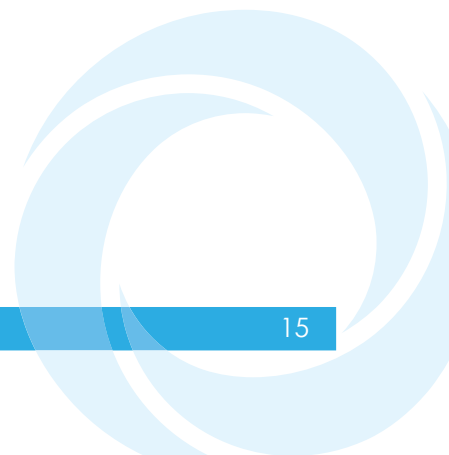
A range of visualisations were used to inform the assessment of setting change. These are detailed in Table A10-4 and presented in EIA Report Volume 2. The locations of visualisations used to support this assessment are depicted on Figure 10-4 in EIA Report Volume 2.

Table A10-4: Heritage Assets Visualisation Locations Agreed with HES

Wireframe / photomontage location Ref.	Heritage asset name and Ref.	Co-ordinates
CH01a (Figure 10-5 in EIA Report Volume 2)	King's Yett Cairn (SM2580) – view from (photomontage)	273730 689222
CH01b (Figure 10-6 in EIA Report Volume 2)	King's Yett Cairn (SM2580) – in-combination view (photomontage)	273768 689297
CH02a (Figure 10-7 in EIA Report Volume 2)	Dundaff Hill, Mound (SM6553) – view from (photomontage)	273844 684925
CH02b (Figure 10-8 in EIA Report Volume 2)	Dundaff Hill, Mound (SM6553) – in-combination view (photomontage)	273863 684846
CH03 (Figure 10-9 in EIA Report Volume 2)	Dundaff Hill, Enclosure (SM7131) – view from (photomontage)	273777 684404
LV8 (Figure 5-2-8a) in EIA Report Volume 2)	Stirling Castle (SM90291) – view from wall walk at parapet enclosing Queen Anne's Garden, south of the Royal Palace (photomontage)	279009 693969

3D turbines have also been generated to be viewed in relevant software, allowing for an understanding of the visibility of the Proposed Development in views from heritage

assets and to inform the assessment of potential changes to their setting. The 3D turbines were viewed against a bare earth 3D terrain model which does not feature buildings, vegetation or other boundaries.



4 Proposed Development Site Context and Conditions

4.1 Introduction

This chapter provides a summary of the site context and conditions for the Proposed Development Site.

4.1.1 Topography and Land Use

The Proposed Development Site occupies an area of semi-improved upland and enclosed heather moorland, commercial conifer forest, and small lochs and reservoirs forming part of the Touch Hills. The Carron Valley Forest and the Kilsyth Hills are to the south and the City of Stirling and its conurbation is to the northeast.

The nearest settlements to the Proposed Development Site are Gargunnoch approximately 6.5km to the north, Stirling and its suburbs c.4.5km to the northeast and Denny approximately 6.5km to the southeast.

The Proposed Development Site is defined by the Bannock Burn which forms a narrow steep sided gully to the north, a minor hill road to the west and the boundary with the existing Craigengelt Wind Farm to the south.

To the east is an area of commercial forest and the Loch Caulter Reservoir. Within the Proposed Development Site the land rises gently from the east at Muirpark, a working farm within the Proposed Development Site, at approximately 206m AOD, to its highest point to the west at 373m AOD.

Located to the west of Muirpark, Drummarnock hill rises to 278m AOD. Buckie Burn, which draws water from the southern half of the enclosed moorland feeds into the River Carron to the southeast.

The main land use within the Proposed Development Site is sheep and cattle grazing, with areas of newly-planted coniferous woodland to the north and northeast of Muirpark, and enclosed moorland to the west, managed for grouse shooting, including areas of muirburn.

4.1.2 Geology

Detailed information on the geology of the Proposed Development Site and its environs is presented in Chapter 8 of the EIA Report Volume 2. A summary is provided below.

The bedrock geology across the Proposed Development Site consists largely of volcanic basaltic rock, an igneous rock formed in the Carboniferous period, and outcrops of sedimentary limestone of the same period along the Bannock Burn.

There are superficial deposits of hummocky glacial deposits of sand and gravel with areas of peat to the west, and Devensian till to the east.

Peat deposits are an organic accumulation of plant material in a wetland context.

Peat provides important information about climate and environmental change, which can include evidence of human activities that interacted with the wet landscape. Therefore, paleoenvironmental evidence (i.e. evidence of past environments and

climate such as seeds, pollen, etc.) from peat deposits can help to reconstruct the environment in which human activities took place.

The peat coverage of the Proposed Development Site has been mapped. This mapping has shown that depths of peat vary from <0.5m to 2.58m. The design development for the Proposed Development has sought to avoid areas of deep peat. Further information on the peat coverage and how areas of deep peat were identified and avoided is provided in Chapter 8 of the EIA Report Volume 2.

4.1.3 Previous Archaeological Investigations

One small-scale evaluation of two limekilns (SC HER Ref: 2725.13 and 2725.14) along the Bannock Burn, comprising terrestrial laser scanning and test pitting has been undertaken within the Proposed Development Site. The purpose of this work was to retrieve samples for archaeomagnetic age-dating to date the mineral processing along the Bannock Burn (James and Bishop 2018).

Two desk-based assessment and walkover surveys have been undertaken within the Proposed Development Site. These were related to forestry schemes and comprised:

- A pre-afforestation assessment of Muirpark undertaken by Headland Archaeology in 1997 (Carter 1997);
- A walkover survey undertaken in 2011 by Alder Archaeology in advance of tree planting (Barton 2011); and
- A further desk-based assessment and walkover survey undertaken at Muirpark in 2019 by Rathmell Archaeology to inform tree planting.

While the results of these previous studies are limited, they provide some additional information to inform the baseline for this assessment.

4.2 Archaeological and Historical Background

This section provides a summary of the archaeological and historical background for the Proposed Development Site to inform the historic environment baseline for the assessment.

There are no heritage assets belonging to the Palaeolithic and Mesolithic period within the Proposed Development Site or the wider landscape, with the first archaeological remains recorded in the historic environment baseline dating to the Neolithic period.

4.2.1 Neolithic and Bronze Age (3,800 BC – 700 BC)

From about 3,800 BC, Scotland saw the introduction of cereal cultivation and domesticated animals, together with a slow transformation of the peoples' lifestyle from hunter gathering to subsistence agriculture.

This period was characterised by the introduction and use of pottery, construction of megalithic monuments, such as standing stones and stone circles, permanent settlement, and commemoration of the dead in the form of communal funerary monuments, such as chambered cairns, and the production of rock art.

Examples of prehistoric ritual monuments near the Proposed Development Site include the two standing stones at Waterhead (SM2719) located on a small hill summit overlooking the valley of the River Carron to the south of the Proposed Development

Site, and a number of possible stone settings recorded on the SC HER within 10km of the Proposed Development Site, but which may be geological in origin.

Further changes occurred during the Bronze Age (2,500-700 BC), with the arrival of new ideas and communities associated with a new type of pottery (Beaker pottery), the first use of metal and a change in funerary practise to individual burials in cairns or barrows. This period also saw a decline in climatic conditions which resulted in a gradual abandonment of upland areas.

Known examples of heritage assets within the wider landscape which are likely to date from the Bronze Age include the cairn at King's Yett (SM2580) approximately 1.5km to the north of the Proposed Development Site, and the burial mound located on the north-facing slope of Dundaff Hill (SM6553; approximately 2km to the south of the Proposed Development Site).

There are two further examples near Todholes (SM4491; SM2492) c.4.5km to the west of the Proposed Development Site. A number of earthworks and cairns within the wider landscape have also been interpreted as burial mounds and are recorded on the SC HER these including examples at Touch (SC HER Ref: 3412; 3420; 3422; 3411) and at Earl's Hill (SC HER ref: 736).

Prehistoric rock art is a broad term used to describe incised, pecked or abraded marks carved into natural rock surfaces during the prehistoric period. Included in this group of heritage assets are cup-marked stones, which are the most abundant type of rock art in Scotland.

Examples recorded near Stirling include those at King's Park (SM2540) and Buckieburn Reservoir (SC HER Ref: 3403). Despite being a relatively common feature in some areas of Scotland and often associated with evidence of early farming communities, little is known about their original purpose.

Evidence of settlement during this period within the environs of the Proposed Development Site is sparse and characterised by groups of hut circles (represented in the archaeological record as a circular depression sometimes accompanied by a low earthen bank and/or stone wall forming the foundations of a house).

These are generally assumed to date from the Bronze Age but may also date from the Iron Age or the early historic period. Examples include the hut circle located on a low rocky knoll at Castlehill (SM7017) approximately 2.8km to the north-northeast of the Proposed Development Site and the hut circle at Double Craigs (SM608), approximately 8.5km to the west.

4.2.2 Iron Age (700 BC – 79 AD)

During the Iron Age new types of structures and settlements were established in the region, principally located in prominent positions designed to enable a level of control over those passing through the landscape.

These include defended enclosures such as duns, hillforts and crannogs. Duns are often sited on elevated positions within the landscape which may have provided natural defensive qualities and/or facilitated their role as a focus in the landscape dominating the territory directly associated with or controlled by those living in the dun (see Figure 3-1).

They are circular or oval in plan with drystone enclosure walls. Examples include the three duns approximately 3.5km to the northeast of the Proposed Development Site at Castlehill Wood, Murrishall Farm and Wester Craigend (SM177; SM7016; SM2121).

Hillforts or larger defended enclosures are characterised by drystone walls or earthen ramparts comprising banks and ditches often encircling a hilltop or prominent natural landscape feature.

Generally, these assets have a broad date, but the majority appear to originate from the Iron Age, with some likely to have continued into use into the early medieval. Examples include Lewis Hill, Sauchie Craig Fort (SM2120), dramatically positioned on the cliff edge c.1.3km to the northeast of the Proposed Development Site.

Crannogs are partly artificial islands formed by deposited material and structural piles and palisades built in wet environments, such as lochs. Generally, these assets have a broad date, but the majority appear to date from the Iron Age.

A wooden structure on a now submerged island within Loch Coulter Reservoir immediately southeast of the Proposed Development Site, has been interpreted as a possible crannog (SC HER Ref: 709).

While also performing a defensive function, but more domestic in nature, a number of circular or oval late prehistoric palisaded enclosures have been identified from crop marks from aerial photographs within the wider landscape.

These are largely located within the more fertile lowlands and include the example at Plean Cottages (SM6480), which has been identified as two overlapping palisade lines that reflect two phases of enclosure of a small late prehistoric settlement.

Other examples of domestic settlement of this period include homesteads. These are usually undefended small groups of hut circles, sometimes associated with boundary enclosures.

Examples include that at Common Hill (SM1732) and Woodside (SM4599). Located approximately 6.5km to the northeast of the Proposed Development Site, Woodside homestead comprises two stone walled round houses scooped out of the northeast facing slope within a D shaped enclosure and a small enclosure to the east.

No evidence of Iron Age activity has been previously identified with the Proposed Development Site.

4.2.3 Roman (79 AD – 211 AD)

The Roman period in Scotland is characterised by a series of military campaigns and short occupation which ended in AD 211. Evidence of Roman activity in close proximity to the Proposed Development Site primarily consist of features relating to the Antonine Wall.

Construction began in AD 142 during the reign of Emperor Antoninus Pius to prevent 'barbarian' incursions in the most northwestern corner of the Empire. Although not constructed of stone like Hadrian's wall to the south, this 60km earthen bank with strategically placed forts demonstrates the effort that the Romans were willing to put into protecting and managing their frontiers.

Indeed, the Antonine Wall is the most heavily-defended component of the extant Roman frontier systems delineating the former empire. It is likely that the frontier was not

intended as an impregnable fortification, rather a system to enable observation of native activity, communication between installations, and rapid response by auxiliary and Legionary forces stationed along the length of the wall to any emerging threats.

Siege warfare was not part of the 2nd century Roman military repertoire and meeting an adversary in the field was always the preference.

In addition, the campaigns and construction of the frontier provided Antoninus Pius with some much-needed military experience and a theorised easy victory over Southern Scotland.

This was by no means the most northerly fortification the Romans had in the British Isles at the time with permanent forts extending north to Perth, mirroring the distribution of the temporary camps that extended to Morayshire in the previous century.

4.2.4 Early Medieval (211 AD – 900 AD)

This period in Scotland is characterised by the process of early state formation and the complex power structures and polities that come with that. The main powers vying for control were the Pictish Kingdoms, the Gaelic kingdom of Dál Riata, and the Anglian kingdom of Bernicia / Northumbria.

Stirlingshire was part of the kingdom of Gododdin which was centred in the southeast of Scotland and included Lothians, but by the 7th century the area had come under control of Bernicia. Bernicia would later form the kingdom of Northumbria and would become the dominant power in southern Scotland.

During this period of political uncertainty, defended enclosures, such as hillforts continue to be in use, and adapted as places of high-status settlement, as well as trade and manufacture.

Battles between rival factions were common with the Battle of Srath Ethairt between the Pictish king Talorcen son of Ainfrith and Dúnchad son Conaing, likely from Argyll, occurring in the Stirling area during a larger conflict between the Picts and the Northumbrians.

Early Medieval reuse of hillforts can sometimes be identified by their vitrification (a process of extensive and intentional burning resulting in their destruction). The hillfort known as Abbey Craig (SM2542) is approximately 11km northeast of the Proposed Development Site, is the only example of a vitrified hillfort in Stirlingshire.

Few heritage assets dating to the early medieval period have been identified in Stirlingshire, but those that have been include incised stones, or are associated early Christian churches.

4.2.5 Medieval (900 AD – 1560 AD)

Reflecting the turbulent nature of politics and society in medieval Scotland, the most common and often best-preserved monuments from this period are defensive or religious in nature, including castles.

Stirling Castle was one of the most important royal castles in Scottish. The earliest certain reference to the existence of Stirling Castle dates to the early 1100's by Alexander I and the ensuing 100 years would see it solidified as the preferred royal residence by Alexander II and as an important strategic fortification.

It is therefore unsurprising that Stirling is one of the oldest royal burghs in Scotland having been granted the title in the 12th century by King David I. This allowed Stirling to elect a council, levy taxes and hold markets.

The strategic importance of Stirling is primarily derived from the fact that it was the main overland route through Scotland and, until the 18th century, the lowest point where the River Forth was bridged.

As a result, the occupation of Stirling Castle was deemed a vital objective when aiming to wage war throughout Scotland with it changing hands four times between 1296 and 1298/9, including once after the battle of Stirling Bridge (BTL28). Control of the castle was also one of the main objectives during the battle of Bannockburn in 1314 (BTL4).

Generally, the nature of medieval rural settlement in Scotland is still not well understood. While there were nucleated medieval village settlements in rural Scotland, smaller townships (or clachans) were more common, with families working the land in joint tenancies using the runrig system.

Under this system, an area of land was divided into irregular strips, each of which was then allocated by lot to a tenant on a rotation system. It is likely that the continual use and adaption of farming settlements from this period until the Improvement Era and the largely ephemeral nature of their construction could account for this lack of archaeological evidence for the vernacular architecture of this period.

4.2.6 Post-medieval (1560 – 1900 AD)

The period between the late 17th century and early 19th century is often referred to as the Improvement Era. Changes in agricultural practices, innovations in farming technology and new forms of land tenure resulted in a significant reorganisation of the rural economy and landscape.

This period witnessed the decline and abandonment of some upland farming settlements, field enclosure, attempts to improve marginal land through drainage and clearance, and the introduction of new forms of agricultural buildings and practices.

Summer grazing of remote upland areas was a common practice across Scotland throughout this period. The physical remains of this seasonal movement of livestock between lowland settlements and upland summer pastures, is characterised by shielings, single or groups of simple often stone built structures. Shielings provided temporary accommodation by people tending livestock grazing on the open hill.

The City of Stirling also saw many changes in this period. Its population grew substantially throughout the 18th and 19th centuries, doubling from c.5000 to over 10,000 between 1801 and 1851, with growth and expansion continuing throughout the 20th century.

It was not until the late 18th century, however, that Stirling would expand beyond its medieval core. This expansion was primarily to the south towards St Ninians along Port Street with some new residential streets laid out to the east. The railway connection in 1848 stimulated further development and drew commercial activity outside of the historic marketplace of Broad Street.

The expansion of Stirling's burgh boundaries which started in the 18th century would result in the incorporation of historic villages within Stirling by the 19th century. The examples of Bannockburn, Torbrex, and Cambusbarron, are of particular interest due to

the role that the successful weaving industry played in the development of these areas, causing them to notably grow throughout the 18th and 19th centuries.

John Thomson's map of Stirlingshire created for the Atlas of Scotland, published in 1820 identifies a single building named as 'Park' at roughly the same location as Muirpark is today.

Roy's Military Survey of Scotland (1747-55) suggests that buildings were present at this time at Muirpark but named Gofferhole with a similar distribution of buildings and small enclosures recorded on historic OS mapping.

Roy depicts these buildings surrounded by what can be interpreted as fields under rig and furrow cultivation. These areas roughly correspond with the physical remains of rig and furrow identified from aerial photographs and seen as low earthworks during the walkover survey undertaken for this assessment.

The First Edition OS 25" to a mile map (published 1862) depicts Muirpark as a group of four buildings around a central open farmyard.

Small enclosures lined with trees are shown to the west of the farmstead, which are themselves surrounded by large fields with long linear field boundaries enclosing what appears to be semi-improved moorland.

Beyond these enclosures to the west is an area depicted as largely open moorland. The farmsteads and enclosures to the northwest of Muirpark are not depicted or are the presumed later quarrying and lime kilns along the Bannock Burn.

The Second Edition OS 25" to a mile map (published 1897) shows little change. The shielding or farmstead at the centre of the Proposed Development Site is depicted, showing two small buildings linked by a boundary feature (SC HER Ref: 3379).

Similarly, no significant changes are noted on the 1917 edition of the OS 25" to a mile map, with the exception of the depiction of the small enclosure to the north of the two small buildings (SC HER Ref: 3379).

According to the Statistical Accounts of Scotland, the population of St Ninians parish had steadily grown throughout the 18th century and by 1792 it had reached a population of 7079 (Sinclair 1796, p. 397).

Arable farming in the area typically took the form of growing a cycle of beans, oats, barley and wheat with most farmers growing varying quantities of potatoes (Sinclair 1796, p. 390-1).

Local industry was mostly centred around Bannock Burn for the manufacture of cotton-cloth with tanneries; the manufacture of nails, and the extraction of coal being other key industries in the area.

Lime too was important with its extraction located at Craigend and Murrayshall, however, there is no mention of the lime workings within the Proposed Development Site (Sinclair 1796, p.394-5) Some of this lime would also be used to improve soil conditions of fields nearby (Sinclair 1796, p. 390).

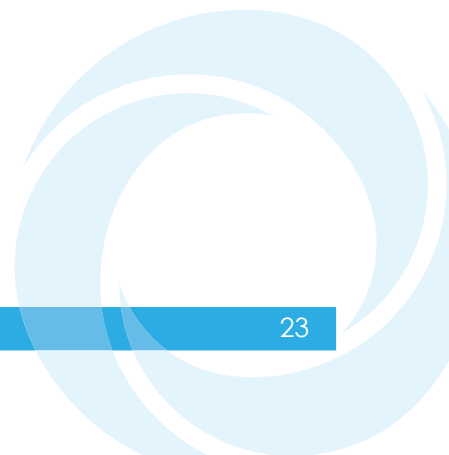
4.2.7 Modern (1901 – Present Day)

The current land use within the Proposed Development Site and its surrounding environs is largely rough grazing and enclosed moorland management for grouse shooting, commercial forest and renewable energy production.

Aerial Photographs

Aerial photographs held by NCAP and available on-line which cover the Proposed Development Site have been identified and reviewed. These comprised sorties from 1946 and 1988.

While no previously unrecorded heritage assets were identified within the Proposed Development Site, however the aerial photography has been used to map further areas of rig and furrow cultivation to the east of the Proposed Development Site, within areas of Improvement Era enclosure close to Muirpark.



5 Historic Environment Baseline

5.1 Introduction

This chapter sets out the historic environment baseline conditions for the Proposed Development. It discusses the heritage assets within the Proposed Development Site and in the wider study areas with the potential to be affected by the Proposed Development.

It describes their cultural significance, including any contribution made by their setting, and assesses their importance. Heritage assets discussed in this chapter are shown on Figures 10-1, 10-2 and 10-3 in EIA Report Volume 2.

5.2 The Proposed Development Site

The location of heritage assets identified within the Proposed Development Site are depicted on Figure 10-1 in EIA Report Volume 2.

No designated heritage assets have been identified within the Proposed Development Site.

5.2.1 Non-designated Heritage Assets

Twenty-nine non-designated heritage assets are located within the Proposed Development Site. The majority of these are located on the lower slopes Drummarnock Hill (278m AOD) and at Muirpark within areas of improved and semi-improved enclosed farmland, and along the southern bank of the Bannock Burn which forms the northern boundary of the Proposed Development Site.

They are characterised by the remains of pre-Improvement Era farmsteads with associated areas of rig and furrow cultivation, and evidence limestone quarrying and processing.

Evidence of arable cultivation in the form of rig and furrow cultivation is confined to the lower northeast and east facing slopes of Drummarnock Hill (SC HER Ref: 2727; Canmore Ref: 120246; SC HER Ref: 2726; Canmore Ref: 120245) where growing conditions, including drainage and soil depth was sufficient to sustain crops on marginal land.

Identifiable on the ground as low earthworks (refer to Plate 10A-1), the extent of the rig and furrow can best be traced from aerial photography.

While not an uncommon feature in the more productive areas of the upland fringes in Scotland, the cultural significance of these areas of rig and furrow is increased when they are identified as being contemporary with the remains of former farmsteads, such as the building platform to the northwest of Muirpark (SC HER Ref: 2730.01).

Given the contribution of their evidential (physical remains) and historical value in understanding the exploitation of marginal areas and past agricultural practices at a local level the importance of these heritage assets has been assessed to be **low**.

The pre-Improvement Era farmstead identified to the northeast of Muirpark survives as two barely discernible low turf covered building platforms (SC HER Ref: 2730.01; 2730.03 Canmore Ref: 12047; refer to Plate 10A-2 and Plate 10A-3) and an enclosure (SC HER

Ref: 2730.02) seen as a linear earth bank, which runs approximately east to west to the north of the building platforms (see Plate 10A-3).

The farmstead is not recorded on historic OS mapping. A field clearance cairn comprising large boulders is likely to be later field clearance, possibly including material from the structures forming the farmstead (see Plate 10A-2).



Plate 10A-1: View looking south-east of faint traces of rig and furrow cultivation to the north-west of Muirpark

The current setting of these heritage assets comprises a level terrace to the south of a natural ridge of slightly higher ground to the north, within an area of later Improvement Era field enclosures. A modern farm track is located to the south beyond which is an unnamed watercourse.

An area of rig and furrow (SC HER Ref: 2727) is recorded on the northeast facing slope to the south of the watercourse. These elements of this farmstead's setting contribute most to the understanding and appreciation of the likely choice of location designed to take advantage of shelter provided by the ridge of higher ground to the north, provided access to running water and to areas of more fertile and easily workable soils.

The probable functional relationship between the farmstead and the rig and furrow cultivation to the south, also contributes to the cultural significance of the heritage asset.

The remains of a pre-Improvement Era farmstead or shieling survives as a group of two buildings defined as low dry-stone walls, linked by a short length of wall (SC HER Ref:

3397; see Plate 10A-4). To the north, beyond an un-named watercourse fed by a natural spring is a small oval enclosure.

The enclosure is defined by the poorly preserved remains of a drystone wall (refer to Plate 10A5). This may have been a sheepfold or more likely a garden enclosure designed to exclude livestock.



Plate 10A-2: View looking south-east of the building platform (SC HER Ref: 2730.01) and the modern field clearance



Plate 10A-3: View looking south-west from the higher ground above the building platform (SC HER Ref: 2730.03) and enclosure seen as an earth bank (SC HER Ref: 2730.02) towards Drummarnock hill and the Proposed Development Site beyond



Plate 10A-4: View looking north-west of the building remains of the pre-Improvement Era farmstead



Plate 10A-5: View looking north from the farmstead towards the oval enclosure defined by low wall footings

The setting of this heritage asset comprises the higher rocky ground immediately to the southwest, the enclosed moorland that surrounds it, an un-named watercourse to the north-east between it and the associated enclosure (refer to Plate 10A-4).

While there are long views towards Stirling to the northeast these are not intended, and do not contribute to the asset's cultural heritage. A number of turbines are visible to the southwest, as are the telecommunication masts on Earl's Hill to the northwest.

Similarly positioned in a sheltered location near a watercourse, a further pre-Improvement Era farmstead or shieling is located c. 500m to the south-southeast (SC HER Ref: 3380).

Comprising a single three bay building which survives as a low turf covered wall footings, other earthworks to the south and east may be associated with accompanying enclosures. The setting of this heritage asset includes the access track to the south and Craigengelt wind farm to the southwest.

These heritage assets' sheltered locations, access to fresh water, surrounding enclosed moorland and in the case of SC HER Ref: 3397, the functional relationship with the enclosure are the key elements of these assets' setting which contribute most to how they are understood, appreciated and experienced as pre-Improvement Era shielings or farmsteads.

They illustrate the choice of location with ready access to fresh water and the open moorland which would have provided pasture and grazing for livestock. The sheltered positions would have protected the occupants and their animals and crops from the worst of the prevailing wind.

Their cultural significance of these assets is derived from the evidential value of any surviving physical remains, which have the potential to contribute to the understanding

of pre-Improvement Era agricultural settlements, practices and land use. Given that these heritage assets are common and well-understood type found throughout the Scottish uplands, and they have been assessed to be of **low** importance.

Located on the northern boundary of the Proposed Development Site and forming a wider extensive complex of limestone extraction and processing located on both banks of the Bannock Burn within Swallowhaugh over a distance of approximately 1.5km, are a series of limestone quarries and lime kilns (SC HER Ref: 2725).

The lime kilns are characterised by stoney mounds with a central depression and a north facing opening (see Figure 10-4-6). These kilns are of a common 'clamp' design (Bishop *et al* 2017, p.20) which were frequently used throughout in the region (Mitchell 2020, p.281).

Although these are thought to date to the 18th century (Carter 1997, p.79) it is likely that the limestone exposures along the Bannock Burn have been for the exploitation for lime production from as early as the mid- 14th century (refer to Figure 10-4-7 and Figure 10-4-8; Harrison 1993, p.83).

The elements of the setting of quarries and lime kilns which contribute most to how they are understood, appreciated and experienced as 18th century mineral extraction and processing is the association with the limestone deposits along the Bannock Burn, the functional relationship between the quarries and the kilns, and the agricultural land which surrounds it that likely used the product to improve soils (see Figure 10-4-9).

The cultural significance of the group of heritage assets associated with the exploitation of the limestone outcrops along the Bannock Burn, is derived from the evidential value and historical (illustrative) value of their physical remains which have the potential to contribute to the understanding of the technologies and processes employed, early industrial activities and the rural economy.

By the end of the 18th century, it was common to trade in lime over considerable distances (Mitchel 2020, p.142). This means that the lime industry represented by these heritage assets may have had a significance considerably beyond the immediate area.

However, considering how common these lime kilns are, the fact that immediately abundant peat could be used to fuel these kilns (Mitchell 2020, p.119), as opposed to imported coal, and the purely conjectural nature of any far-reaching economic implications of the lime industry here, they have been assessed to be of **medium** importance.



Plate 10A-6: View looking south towards the remains of one of the 12 clamp kiln along the southern bank of the Bannock Burn within the Proposed Development Site.



Plate 10A-7: View looking west up Swallowhaugh of the quarry faces and clamp kiln along Bannock Burn



Plate 10A-8: View looking northeast of the quarry faces and clamp kiln to the south of the Bannock Burn



Plate 10A-9: View looking southwest towards the Proposed Development Site down the Bannock Burn and Swallohaugh from Lewis Hill

Four heritage assets have been identified by the previous pre-afforestation walkover survey (see Chapter 3 for details) to the east of Muirpark in areas which be been subsequently subject to afforestation.

These assets comprise a modern rectangular sheepfold defined by poorly preserved post and wire fencing which is no longer in use (Canmore ref: 364391), a well-defined trackway aligned southwest / northeast partly in use as a farm track (Canmore ref: 120237), a modern quarry (Canmore ref: 364390) and a undated D shaped enclosure defined by a drystone wall (Canmore ref: 364387).

These heritage assets are typical of upland agricultural areas and evidence farming practices and land use from the post-medieval period to the 20th century and have been assessed to be of low to **very low** importance.

5.2.2 Potential for Previously Unrecorded Heritage Assets Including Buried Archaeological Remains

While there are upstanding prehistoric funerary monuments near the Proposed Development Site, including King's Yett cairn (SM2580). There is no evidence of prehistoric activity within the Proposed Development Site. Later medieval and post-medieval activity associated with upland animal husbandry and cultivation is largely restricted to the lower slopes and sheltered locations below 260 m AOD.

Evidence of historic land use of the enclosed moorland within the Proposed Development Site and its surrounding environs appears to have been confined to seasonal occupation and grazing.

This in-combination with the exposed and unproductive environment suggests that there is a **low** to **negligible** potential for previously unrecorded heritage assets, including buried archaeological remains, within the Proposed Development Site.

There are areas of peat with depths measuring between <0.5m to 2.58m within the Proposed Development Site (please refer to Chapter 8 of the EIA Report Volume 2 for details), with the deepest peat deposits found on the hilltops.

It can take over 1,000 years for a metre of peat to form, with the varying depths having the potential to preserve any archaeological remains which predate, or coincide with, the peat formation.

As peat is formed in anaerobic conditions, which prevent the micro-biological activity needed for the chemical breakdown of organic materials there is potential for organic archaeological remains, and **low** to **medium** potential for paleoenvironmental evidence within the Proposed Development Site.

5.3 Inner Study Area

The location of heritage assets identified within the Inner Study Area are depicted on Figure 10-2 in EIA Report Volume 2.

5.3.1 Designated Heritage Assets

Twenty-six designated heritage assets have been identified within the Inner Study Area. These comprise:

- 14 scheduled monuments:
 - three prehistoric funerary and ritual monuments (SM6553; SM7131; SM2580);
 - evidence of a roundhouse (Castlehill, hut circle; SM7017);
 - Sauchie Craig hillfort (SM2120);

- five late prehistoric duns (SM7016; SM177; SM2110; SM2121; SM2243) and one homestead (SM4599);
- cultivation terraces (SM3395);
- Sir John de Graham's Castle, a 13th century motte (SM4278); and
- a 19th century lime kiln (SM36802).
- 21 listed buildings:
 - two category A listed buildings associated with a fish hatchery and fish farm (LB15275; LB15306);
 - 19 category B listed buildings, including those associated with Old Sauchie (LB15299; LB15300), three bridges (LB1964; LB1965; LB11749), two sundials (LBLB15301; LBLB15301) and Buckieburn Church (LB15272); and
 - two category C listed buildings comprising Millnholm bridge (LB15276) and Lochend Farm (LB15288).
- the Inventory Garden and Designed Landscape at Touch (GDL00377).

Of these designated heritage assets, 23 have no theoretical visibility with, or important in-combination views of, the Proposed Development. The key elements of their settings which contribute most to their cultural significance and how they are understood, appreciated and experienced will not be affected by the Proposed Development.

Sixteen designated heritage assets in the Inner Study Area that have been identified as having theoretical visibility have been screened out for further assessment as their settings do not extend as far as the Proposed Development and are currently screened by rotational commercial forest.

In addition, the Proposed Development will not affect the way their current setting contributes to how they are understood, appreciated and experienced or their cultural significance.

Further information on these designated heritage assets and a justification for screening them out of further assessment is presented in Annex B.

The remaining designated heritage assets within the Inner Study Area have been identified as having theoretical visibility with the Proposed Development, the presence of which during operation has the potential to change their setting. These assets have been included for further assessment.

King's Yett, Cairn (SM2580)

Description

This heritage asset comprises the remains of a Neolithic or Bronze Age burial cairn, which survives as an earthen and stone mound approximately 12m in diameter and 1.7m high.

The cairn is located in an area of heather moorland with some young naturally regenerating birch scrub (see Figure 10-5 and Figure 10-6 in EIA report Volume 2). The asset's setting includes extensive areas of rotational commercial forest to the west and north and enclosed semi-improved moorland to the east.

A purpose-built wide pedestrian gravel path 30m to the west of the asset, enables recreational access to the coniferous forestry. The path begins at a small frequently used car park approximately 170m south of the asset. A minor hill road crosses the

heather moorland and provides access to the car park. The noise and movement of vehicles using the car park and minor road forms part of the setting of the cairn.



Plate 10A-10: In-combination view looking northeast of King's Yett, Cairn (SM2580), the terrace on which it has been sited and views over Lewis Hill towards the Forth

A small watercourse called the King's Yett Burn aligned approximately northwest and southeast, flows past the cairn c. 30m to the north. The cairn is sited on a wide terrace sloping gently to the east.

Unlike other prehistoric funerary monuments in the area (such as Dundaff Hill, Mound (SM6553), the position of the cairn in the landscape appears to be related to the watercourse, rather than having been deliberately sited in a prominent (hilltop) location.

Despite this, its location on the gently sloping east-facing terrace enables uninterrupted views over the heather moorland towards the ridge forming Lewis Hill. While present in glimpsed views, the Lewis Hill limits intervisibility over the Forth floodplain beyond (see Plate 10A-10 and Plate 10A-11).

Views from the asset to the south are limited by the rising landform between the cairn and the Bannock Burn. Coniferous trees currently forming a windbreak to the south-east of the minor road, overhead utilities on wooden poles and turbines forming part of the existing Craigengelt Hill Wind Farm can be seen breaking the skyline from the cairn, forming part of the setting of the asset.

When occupied, parked vehicles belonging to people using the small, frequently-used car park to access the forestry paths, and vehicles using the minor road are present in the asset's setting (refer Plate 10A-12 below and Figure 10-5 in EIA report Volume 2).

There is very limited intervisibility with Dundaff Hill, which is just apparent on the skyline some 4.8km to the south of the cairn, behind the windbreaks. The intervening rising landform suggests that the King's Yett cairn was not positioned to exploit views

between it and Dundaff Hill, or that of Dundaff Hill, Mound (SM6553; see Plate 10A-12 below and Figure 10-5 in EIA report Volume 2).

Given the distance between the two assets (nearly 5km), the low-lying position of the King's Yett cairn, and the scale of the visible (above-ground) physical remains of Dundaff Hill, Mound, while the landform on which the mound is positioned (Dundaff Hill) is present in the asset's setting, the mound itself is not discernible.

There is no intervisibility with any other known contemporary prehistoric ritual and funerary monuments. Given their landscape separation and lack of intervisibility, these putatively contemporary assets do not share any further relationship beyond their obvious spatial relationship.

As a place of burial and ritual during the Bronze Age, it is likely that this cairn had a prominent place within a social group's territory and may have acted as a focal point for communal activity in the landscape, as well as serving as a physical and symbolic marker of its builders' place in space and time.

The key elements of the setting of the King's Yett cairn which contribute most to how it is appreciated and understood as a prehistoric funerary monument, and the way it is experienced comprise its positioning next to the watercourse to the north, the gently sloping terrace which enables views to the east over the heath moorland towards Lewis Hill and glimpsed views over the Forth floodplain.

Significance

The cultural significance of this heritage asset is largely derived from the evidential (scientific) value of its physical remains, including any buried archaeological remains that have the potential to contribute to the understanding of prehistoric burial practices.

There is also the potential for environmental evidence preserved in the soils beneath the burial mound that may inform the understanding of climate, local conditions and land cover when the asset was constructed.

While the burial mound belongs to a numerous and widespread group of prehistoric funerary monuments, it has historical (illustrative) value as a good representative example of this asset's type and form, with the potential contribution to the understanding of the diversity of cairns in Scotland and the practice of burial and design of funerary monuments.

Importance

In consideration of this heritage asset's designation and potential to make a substantial addition to the understanding and appreciation of Neolithic and Bronze Age ritual and funerary activity, this asset is of **high** importance.

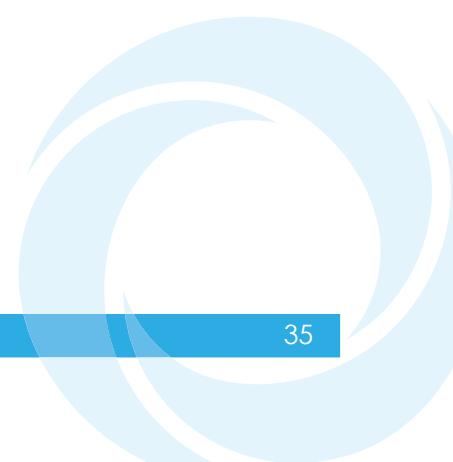




Plate 10A-11: View looking east from King's Yett, Cairn towards the ridge forming Lewis Hill



Plate 10A-12: View looking south from King's Yett, cairn towards the Proposed Development Site, the frequently used car park, coniferous windbreaks and existing Craigengelt Hill Wind Farm

Dundaff Hill, Mound (SM6553)

Description

Dundaff Hill mound comprises the remains of a Neolithic or Bronze Age burial mound approximately 40m in diameter and 2m high. A low bank that surrounds the base of the asset on all but its eastern side this is likely to post-date it.

The mound is located on the western end of a low north-facing ridge below Dundaff Hill, in open ground within rotational commercial forest.

Below Dundaff Hill, but not visible from the mound is Buckieburn Reservoir, beyond which enclosed moorland rises to a height of 358m ASL at Craigengelt Hill, which forms part of the gently rolling landform Touchadam Muir and the Touch Hills (refer to Figure 10-7 in the EIA Report Volume 2).

While the current surroundings of the mound are dominated by rotational commercial forest, the asset's setting includes the existing Craigengelt Hill Wind Farm, the nearest turbine of which is approximately 1.6km to the northwest.

While turbines belonging to this wind farm are prominent in views to the northwest of Craigengelt Hill, the distinct landscape form of rolling hills - Craigengelt Hill, Touchadam Muir and the Touch Hills - remain well-defined, recognisable and easily readable in the landscape.

It is likely that the site of the mound was chosen to take advantage of its prominent location within the landscape. Putative intervisibility and spatial relationship with other contemporary funerary monuments may also have been an important factor in the choice of location, including King's Yett, cairn (SM2580) 4.3km to the north.

There is no intervisibility between the mound and Dundaff Hill, Enclosure (SM7131) approximately 530m to the south (refer to Figure 10-9 in EIA Report Volume 2). Had intervisibility with contemporary monuments been important, then the summit of Dundaff Hill 500m to the south would have provided wider views of the surround landscape and greater theoretical visibility with other possibly contemporary assets.

While there is a clear line of sight between the mound and the King's Yett cairn, given the distance between the two assets (c. 4.3km), the low-lying position of the King's Yett cairn, combined with the scale of the visible (above ground) physical remains of the cairn, the colour palette of the vegetation covering and surrounding it, and its current coniferous forest backdrop, the King's Yett cairn itself is not discernible in views from Dundaff Hill mound.

Given their landscape separation and lack of intervisibility, these putatively contemporary assets do not share any further relationship beyond their obvious spatial relationship.

As a place of burial and ritual during the Bronze Age, it is likely that this mound had a prominent place within a social group's territory and may have acted as a focal point for communal activity in the landscape, as well as serving as a physical and symbolic marker of its builders' place in space and time.

The key elements of the setting of the Dundaff Hill mound which contribute most to how it is appreciated and understood as a prehistoric funerary monument, and the way it is experienced comprise its prominent position on the north-facing slope of Dundaff Hill,

that enables views to the north over Craigengelt Hill, Touchadam Muir and the Touch Hills.

Significance

The cultural significance of this heritage asset is largely derived from the evidential (scientific) value of its physical remains, including any buried archaeological remains that have the potential to contribute to the understanding of prehistoric burial practices.

There is also the potential for environmental evidence preserved in the soils beneath the burial mound that may inform the understanding of climate, local conditions and land cover when the asset was constructed.

While the burial mound belongs to a numerous and widespread group of prehistoric funerary monuments, it has historical (illustrative) value as a good representative example of this asset's type and form, with the potential contribution to the understanding of the diversity of burial mounds in Scotland and the practice of burial and design of funerary monuments.

Importance

In consideration of this heritage asset's designation, and potential to make a substantial addition to the understanding of prehistoric ritual and funerary practices, this asset is of **high** importance.

Dundaff Hill, Enclosure (SM7131)

Description

This heritage asset comprises a prehistoric ceremonial enclosure or cairn visible as a mound approximately 27m in diameter and 3m high. It is surrounded by a ditch 2m wide and an external bank about 1.7m wide.

Such an asset would typically be considered a bell or bowl cairn of Neolithic or Bronze Age date, however, the presence of a natural bedrock outcrop instead of a man-made cairn in the centre suggests the asset may have been associated with other, non-funerary ritual activities.

Located in an area of enclosed rough pasture defined by dry-stone walls approximately 300m to the south-southeast of the summit of Dundaff Hill. The enclosure has been positioned on the edge of a terrace, just above the break of the steep southeast facing slope.

Its setting includes the Carron Valley Forest and Kilsyth Hills to the southwest and south, the Carron Valley to the southeast, Loch Coulter Reservoir to the northeast and to the north the rotational commercial forest covering the north-facing slope of Dundaff Hill (see Figure 10-9 in EIA Report Volume 2).

Three turbines associated with the existing Craigengelt Wind Farm form part of this asset's setting. These are located approximately 2km to the northeast, are set back beyond and behind Dunduff Hill. There is no intervisibility with Dundaff Hill, Mound (SM6553) to the north.

Despite not having been constructed on the highest point of Dunduff Hill, which limits views from the asset to the north and west, the prominent location on the edge of the break of slope, enables open views over the landscape to the south and east.

Due to its position the asset does not become apparent when approached from the southeast, until the steep slope has been breached. This, along with the natural bedrock outcrop may have influenced the siting of the enclosure, to enable a sense of expectation and surprise and to incorporate the outcrop into its form.

This assumes that the enclosure was intended to be approached from the southeast. It is just as valid to suggest that the asset was intended to be approached from the northwest, providing a similar sense of anticipation and surprise when toping Dundaff Hill, and encountering the enclosure in the context of the open views over the landscape to the southeast and east.

Approaching from Dundaff Hill, Mound (SM6553) would have had a similar affect.

The spatial and functional relationship with other possibly contemporary monuments, including the burial mound (SM6553), may have influenced its siting in the landscape.

The spatial relationship to another prehistoric funerary and ritual monuments, and the landforms to the southeast and east, and long views over the landscape, makes a positive contribution to how this asset is understood and appreciated as a possible prehistoric ritual or funerary monument.

Significance

The cultural significance of this heritage asset is predominantly derived from its evidential (scientific) value of its standing remains and any buried archaeological remains present which have the potential to significantly enhance the understanding of the form and function of the enclosure and prehistoric ritual and funerary activity which may have taken place.

In addition, this heritage asset has historical (illustrative) value given the preservation of its upstanding remains in association with a natural feature and potential contribution of the spatial and functional relationship to other similar monuments (SM6553) to the understanding of the distribution, character and meaning of late Neolithic and early Bronze Age ritual and funerary sites.

Importance

In consideration of this heritage asset's designation, unusual incorporation of a natural feature and potential to make a significant addition to the understanding of Neolithic and Bronze Age burial and ceremonial activity, this asset is of **high** importance.

Sauchie Craig, Fort (SM2120)

Description

Located approximately 1.5km to the northeast of the Proposed Development Site, this heritage asset is a roughly oval later prehistoric defended enclosure occupying a rocky knoll above the cliff edge forming Sauchie Craig on Lewis Hill.

The defences comprise two outer ramparts and a ditch (see Plate 10A-13), with an entrance on the eastern side of the enclosure. There are no defensive structures along the top of the cliff edge, and no internal features are evident.



Plate 10A-13: View looking northwest towards Sauchie Craig Fort with the outer rampart still partially visible.

The defended enclosure has been positioned to take advantage of the natural defences provided by the precipitous cliff edge forming Sauchie Craig to the northwest above the entrance to Windy Yet Glen.

The enclosure is set back into the entrance to the glen and not on the more exposed or inwardly visible section of Sauchie Craig to the southwest, or at the highest point on Lewis Hill. This suggests that views to the west were not as important as the shelter provided by the enclosure's position, or views north, northwest and east towards the Forth (refer to Plate 10A-15 and Plate 10A-16).

The position of the enclosure may have been designed to enable the occupants to control and monitor the movement of people through the landscape (refer to Plate 10A-14), including Windy Yet Glen.

The setting of the enclosure includes the North Third Reservoir and dam to the west and rotational commercial forest, as well as semi-natural mature woodland along Lewis Hill (see Plate 10A-14 and Plate 10A-15).

The key elements of this asset's setting which contribute most to how it is appreciated, understood and experienced as a defended enclosure are its dramatic cliff top position which takes advantage of the natural defensive position of Sauchie Craig, views down and into Windy Yet Glen, and wider views over the surrounding landscape to northwest, and to a lesser extent towards the lowlands of the Forth floodplain to the north and northeast (see Plate 10A-15).

Significance

The cultural significance of this heritage asset is predominantly derived from the evidential (scientific) value of its physical remains, including any buried archaeological remains that may be present, that have the potential to inform the understanding of late prehistoric to early medieval activity and settlement in the area.

The fort also has some historical (illustrative) value given its potential to contribute to the understanding of defended enclosures as well as settlement, economy and the development of the landscape at the time.

Importance

In consideration of this heritage asset's designation, and potential to make a substantial addition to the understanding and appreciation of prehistoric fortified settlements, this asset is of **high** importance.



Plate 10A-14: View looking northwest from Sauchie Craig Fort over the cliff edge and North Third Reservoir and dam.



Plate 10A-15: View looking north from Sauchie Craig Fort over the entrance to Windy Yet Glen (right of image) and the Forth floodplain beyond.



Plate 10A-16: View looking northeast from within Sauchie Craig Fort towards the Forth Valley

Touch Muir (SM2243), Wallstale (SM2110), and Castlehill Wood (SM177), duns

Description

Touch Muir and Wallstale duns (SM2243; SM2110) comprise broadly circular stone walled structures 12.8m and 13.7m in diameter respectively, which are up to 3m thick. Castlehill Wood dun (SM177) is oval and measures 22m by 15m with a wall thickness of almost 5m. All three have entrances in their east.

Paving was noted in the entrance passageway for both Wallstale (excavated in the mid-1960's) and Castlehill Wood, (excavated in 1955). The artefacts recovered from Castlehill Wood suggested a 1st or 2nd century A.D. occupation.

Touch Muir dun is in an area of enclosed moorland approximately 4km north of the Proposed Development Site. The setting of the dun comprises the enclosed moorland, Craigbrock Burn to the north and an unnamed watercourse to the south, and to the south, the two Touch reservoirs.

Wallstale dun is located c. 3.3km northeast of the Proposed Development Site on the wooded southern slope of Gillies Hill by Gateside Road, north of the Bannock Burn. The dun's setting includes the scheduled lime kilns (SM3680; see below) just below it and Murrayshall Quarry to the northwest.

The setting of Castlehill Wood dun includes its elevated position on a natural ridge of high ground approximately 3km to the northeast of the Proposed Development Site. Its chosen location provides open views to the southwest towards the Proposed Development.

Views to the west, north and east are currently limited by rotational commercial forest. The dun is located on the edge of an area formally used as a vehicle testing and training ground by the Ministry of Defence, and deeply rutted vehicle tracks and manmade obstacles form part of its setting. It now forms part of a clay pigeon shooting range.

The positioning of these heritage assets in the landscape appears to have been an important design consideration, their elevated locations providing views over the landscape around them. Touch Muir dun's positioning on a raised area of land may have been designed to provide a solid foundation for its constructions compared to the waterlogged ground that surrounds it.

Wallstale dun was constructed on an 8m scarp, over 1.5m high, which may have assisted in making the structure appear larger in the landscape. The positioning of Castlehill Wood afforded it open views to the north, east and south, and was likely a prominent feature in the landscape.

This prominence has been significantly reduced, and its visible physical remains are no longer evident unless in close proximity to the asset.

Significance

The cultural significance of these heritage assets is largely derived from the evidential value of their surviving physical remains, including any associated archaeological remains, which have the potential to contribute to the understanding of late prehistoric to early medieval domestic, social and economic activity.

While these duns have been subject to stone robbing and are generally in poor condition, they also have some historical (illustrative) value derived from the potential of their physical remains to contribute to the understanding of the development of domestic architecture and dun design.

Importance

In consideration of these heritage assets designation and potential to make a substantial addition to the understanding and appreciation of rural Iron Age and early medieval settlement and building design, these assets are of **high** importance.

5.3.2 Non-designated Heritage Assets

A further 294 non-designated heritage assets have been identified within the Inner Study Area from data held by the SC HER and Canmore.

These are characterised by poorly preserved prehistoric funerary and ritual monuments, prehistoric rock art, the remains of late prehistoric settlements, including duns and groups of hut circles.

These assets also include pre-Improvement and Improvement Era buildings, farmsteads and their associated enclosures, areas of rig and furrow cultivation, shielings, sheepfolds, chapels, churches and their associated burial grounds, post-medieval bridges, quarries, lime kilns and the site of a World War Two searchlight battery.

These have been assessed to be of **very low** to **medium** importance. Given their locations, type and form, changes to the setting of these heritage assets are not predicted to result in significant effects.

5.4 Outer Study Area

The location of designated heritage assets identified within the Outer Study Area and those beyond the Outer Study Area that may experience setting change are depicted on Figure 10-3 in EIA Report Volume 2.

The following designated heritage assets are located within the Outer Study Area:

- The Antonine Wall world heritage site;
- 40 scheduled monuments, including Stirling Castle (SM90291);
- 757 listed buildings;
- 14 conservation areas, the majority of which are within the City of Stirling, including Stirling Town & Royal Park;
- four Inventory-listed Garden and Designed Landscapes at Gargunnock House (GDL00188), Colzium Lennox Estate (GDL0041), Cowane's Hospital (GDL00400) and the Kings Knot (GDL00241); and
- four Inventory-listed historic battlefields at Bannockburn, Kilsyth, Stirling Bridge and Sauchieburn (BTL4; BTL13; BTL28; BTL38)

In consideration of their designations as a world heritage site, scheduled monuments, listed buildings, conservation area, and inclusion in the inventory garden and designed landscapes and inventory of historic battlefields these heritage assets are of **high** importance.

No designated heritage assets beyond the Wider Study Area whose setting may be changed by the presence of the Proposed Development within their setting have been identified.

The **Antonine Wall WHS** forms part of a multinational Frontiers of the Roman Empire WHS with Hadrian's Wall and the fortified German *Limes*.

The wall was 60km long and bisected the Forth-Clyde isthmus – the narrowest part of mainland Scotland and the shortest route for the frontier fortifications. Constructed in the A.D. 140s under the order of Emperor Antoninus Pius, it formed part of an attempt to conquer and control parts of northern Britain.

Although its use was relatively short lived, it demonstrates Roman technical skills, strategic understanding of topography and military tactics, organisation and knowledge at the Empire's frontier.

The Outstanding Universal Values (OUV) of the Antonine Wall required for WHS designation have been identified under the following criterion (The United Nations Educational, Scientific and Cultural Organization (UNESCO) 2005):

- *“Criterion (ii): The extant remains of the ... Antonine Wall constitutes significant elements of the Roman Frontiers present in Europe. ... The frontiers still today form a conspicuous part of the landscape;*
- *Criterion (iii): As parts of the Roman Empire's general system of defence the ... Antonine Wall [has] an extraordinarily high cultural value. [It] bear[s] an exceptional testimony to the maximum extension of the power of the Roman Empire through the consolidation of its north-western frontiers and thus constitute a physical manifestation of Roman imperial policy.*
- *Criterion (iv): The ... Antonine Wall [is an] outstanding [example] of Roman military architecture and building techniques and of their technological development, perfected by engineers over the course of several generations.”*

The 40 scheduled monuments within the Outer Study Area are characterised by Neolithic and Bronze Age funerary and ritual monuments, prehistoric rock art, Iron age hillforts, duns, palisade enclosures and settlements containing hut circles, evidence of Roman activity associated with the Antonine Wall.

They also include medieval castle motte, late medieval and post-medieval bridges and evidence of industrial activity and associated transport links.

The majority of the 757 listed buildings within the Outer Study Area are located to the east of the M9 motorway within the City of Stirling and its surrounding conurbations. As such, these are characterised by post-medieval dwellings pertaining to the growth of Stirling and its surrounding villages.

Additional post-medieval dwellings and parish churches are also present within the cores of villages and towns of Denny, Kilsyth and Gargunnock. In the countryside lie country houses and associated buildings and isolated rural dwellings and farmsteads.

Of the 14 conservation areas identified within the Outer Study Area the majority are within the City of Stirling. The following nine conservation areas have limited theoretical visibility with the Proposed Development:

- **Stirling Town & Royal Park (CA218)** – encompassing the historic core of the modern City of Stirling, including the castle and its historic landscape, the late-medieval royal burgh, medieval street pattern and later Georgian, Victorian and Edwardian

expansion. The cultural significance and key elements of the setting which contribute most to its character and appearance comprise:

- The volcanic outcrop in the surrounding flat carse lands of the River Forth;
 - Stirling Castle which occupies the summit of the crag with the historic Old Town lining the tail below, and the crag itself;
 - The historic Royal parklands including: the King's Park, Butt Park, the Haining and the Royal Gardens incorporating the King's Knot. An important cultural landscape; vital in views to and from the castle;
 - Gowanhill, an important archaeological site and very important landscape element to the north-east of the castle towards Stirling Old Bridge; and
 - The Old Town and Ballengeich cemeteries enhance the physical and cultural setting around the Castle Rock (Stirling Council 2014g);
- **King's Park (CA220)** – a residential suburb below Stirling Castle which developed throughout the 19th century. The cultural significance and key elements of the setting which contribute most to its character and appearance comprise:
 - The first expansion of Stirling beyond the Royal Brough Walls;
 - A substantial and coherent group of residential properties forming one of the best examples of a Victorian suburb in Scotland;
 - An example of coherent planning of large two-storey detached and semi-detached villas set within their own garden plots defined by stone walls;
 - An attractive and mature green environment enhancing by its setting immediately below Stirling Castle and with the King's Park to the west; and
 - Views towards the Stirling Castle and the Old Town (Stirling Council 2014d). Areas of public green space, broad tree lined avenues and private gardens;
 - **Park Place / Randolphfield (CA221)** – an important residential district which developed from the second half of the 19th century into the first half of the 20th century. The cultural significance and key elements of the setting which contribute most to its character and appearance comprise:
 - Significant part of Stirling's residential expansion from the second half of the 19th century on former agricultural land;
 - Variety of architectural design from substantial Victorian villas to modest inter-war properties;
 - King's Park to the north; and
 - The three historic routeways that continue to be busy through roads contrasting with quiet residential streets beyond (Stirling Council 2014e).
 - **Randolph Road (CA222)** – a significant part of Stirling's later 19th and early 20th century residential expansion. The cultural significance and key elements of the setting which contribute most to its character and appearance comprise:
 - Originally the historic hamlets of Bellfield and Newhouse;
 - Laird's House, Beechwood, set in its historic parkland;
 - Residential development during the inter-war years;
 - Eclectic mix of architectural styles and property of varying status;
 - Important examples of the work of local architects McLuckie & Walker;
 - The B8015, a major route into the city centre (Stirling Council 2014f); and

- Wide residential avenues and fairly level topography generate long vistas with houses set back from the street line behind front gardens;
- **St Ninians (CA223)** – The site of an important 12th century kirktoon which developed into a notable village by the 19th century. The cultural significance and key elements of the setting which contribute to its character and appearance comprise:
 - Old Parish Church (including the steeple, chancel remains and two tombstones; a scheduled monument) within a historic graveyard setting and is raised thus dominating the local green space and surrounding buildings;
 - The relationship with the designated area of the Battle of Bannockburn (1314; see below) which it lies within;
 - Cluster of listed ecclesiastical and residential buildings on Kirk Wynd, including traditional 17th century crowstepped cottages (category B listed buildings);
 - Connected to the Royal Burgh of Stirling via Randolph Terrace (B8051) and Burghmuir Road (A9);
 - Tall stone boundary walls and mature trees provide an area of seclusion around the ecclesiastical features; and
 - Substantial post-WW2 demolition of historic buildings and the construction of the A9 (Stirling Council 2014h);
- **Torbrex (CA224)** – A weaving village that expanded in the 18th century due to the success of the industry. The cultural significance and key elements of the setting which contribute to its character and appearance comprise:
 - Unusual survival of the village core despite the expansion of the Stirling burgh boundaries in the 19th century due to lack of a direct vehicular road to the Royal Burgh;
 - Dominance of late 18th – early 19th century vernacular architecture along a winding central road;
 - Rubble stone walls and mature hedging surrounds the village; and
 - Predominantly flat with glimpsed views of Stirling Castle and the Ochil hills (Stirling Council 2014i);
- **Cambuskenneth (CA217)** – An ecclesiastical centre that underwent residential expansion in the 18th and 19th centuries. The cultural significance and key elements of the setting which contribute to its character and appearance comprise:
 - Cambuskenneth Abbey ruins (a scheduled monument), the bell tower of which is one of the best examples of 13th century Scottish architecture;
 - 18th and early 19th century vernacular and traditional cottages;
 - Views of the Ochil hills, the valley of the Forth, Stirling Castle as well as some of the best views available of the National Wallace Monument; and
 - An attractive remote setting reinforced by the limited vehicle access and the large green spaces that surround the village (Stirling Council 2014b);
- **Bannockburn (CA202)** – A historic village influenced by the Bannock Burn that expanded in the 18th and 19th centuries due to the presence of the weaving industry. The cultural significance and key elements of the setting which contribute to its character and appearance comprise:
 - The association with Bannock Burn and the resulting 15th century bridge (a scheduled monument) and an early 19th century bridge;

- The dominant 18th – 19th century architecture that line three important thoroughfares;
- Relationship with the Battle of Bannockburn (1314; see below) which it lies within;
- Views of the Bannock burn and Old Bridge, the New Bridge and the former Royal George Mill; and
- The open green areas and mature trees that the former industrial centre has been converted into facilitating wide vistas (Stirling Council 2014a);
- **Drip Bridge (CA638)** – A small hamlet which centres around an 18th century bridge on the site of a probable medieval ford. The cultural significance and key elements of the setting which contribute to its character and appearance comprise:
 - An association with the late 18th century and early 19th century Old Inn Cottage and Tollhouse (a category C listed building);
 - Traditional late 18th and early 19th century detached houses which dominate the architectural style;
 - Views of Ochil hills, River Forth, Craig Forth and the Hill of Drip; and
 - New Drip Bridge (A84) which bypasses the Old Bridge and hamlet but is screened by mature trees preserving a rural character (Stirling Council 2014c).

Of the four Inventory Gardens and Designed Landscapes located within the Outer Study Area, two have theoretical visibility of the Proposed Development.

- **Cowane's Hospital (GDL00400)** - Established in the early 17th century, this GDL is a rare survival of a garden designed for a civic charitable institution and the work of Thomas Harlaw, gardener to the 6th Earl of Mar.

The original layout of terraces, Dutch parterre and bowling green remains evident. Surviving documentary evidence and its important contribution as part of the social and cultural development of the burgh of Stirling adds considerably to its historical value.

Located in the heart of the old core of the City of Stirling, c. 0.4 km south-south-west of Stirling Castle and the hospital garden occupies an elevated position at the south-west side of Stirling Castle Crag. The compact site is bounded immediately to the north-west by the hospital building.

The north-east boundary is defined by the railings and low parapet wall on the south side of the paved approach walk. A 1.6 m high wall forms the full length of the south-west boundary of the garden except at the upper terrace which provides views across the garden and a raised vantage point from which to take in views.

This is now partially obscured by mature trees, which extend west across the plunging descent of the wooded slopes below, leading the eye to the south-west to the Campsie Fells and Gargunnoch Hills and north-west to the mountain peaks of Ben Lomond, Ben Venue and Ben Ledi (HES 2012c).

- **Kings Knot (GDL00241)** – Located immediately to the south-south-west of Stirling Castle on the north side of the Kings Park, historically the King's Knot was the garden and park attached to Stirling Castle and remnants of the structure can be seen today. It provides an important landscape setting for the castle.

An octagonal, stepped mound standing within a double-ditched enclosure. When first created it was probably covered with flowers, treillage and fountains, and there is a suggestion that an ornamental building surrounded by a moat was at its centre. The surrounding pasture was planted out to be viewed from the castle (HES 1987).

Three of the four inventory listed historic battlefields located within the Outer Study Area have theoretical intervisibility with the Proposed Development. The designation record and summary reports and accompanying mapping have been used to identify the special qualities and key landscape characteristics of the designated heritage assets.

- **Battle of Stirling Bridge (BTL 28)** – The Battle of Stirling Bridge (11 September 1297) is significant as one of the most prominent Scottish victories of the Wars of Independence. It is the high point of the campaign of William Wallace and Andrew Moray and results in Wallace's appointment as Guardian of the Realm of Scotland. It also holds a prominent cultural legacy, both in its connection to Wallace and in the wider legacy of the Wars of Independence within Scotland (HES 2012b).
 - **Special Qualities** – The only physical remains of the battle relate to the bridge that is assumed to be the one presented at the time, which are located within the bed of the River Forth up stream of the current bridge (SM8264). There is some limited potential for artefactual material associated with the battle within previously undisturbed areas of the battlefield.
 - **Key Landscape Characteristics** – While extensive urban development within the battlefield the River Forth, open areas of the river floodplain, the bend in the river and Abbey Craig to the north-east where Wallace and Moray were positioned still make some contribution to the understanding and appreciation of the battlefield, the progression of the battle and the events that took place.
- **Battle of Bannockburn (BTL 4)** – The Battle of Bannockburn (23/24 June 1314) is significant as one of the most iconic battles of Scottish history and as a key battle in the Scottish Wars of Independence. It gave King Robert I (the Bruce) effective control of Scotland and essentially removed both English forces and his own internal enemies from within the country. It is also of incredible significance in the historical and cultural identity of Scotland (HES 2011).
 - **Special Qualities** The only physical remain of the battle is a probable 14th century arrowhead. Extensive metal detecting has yielded no artefacts related to the battle and combined with the early date and nature of the fighting the potential for the recovery of military artefacts is considered relatively low. There is a potential for the identification of pits dug to disrupt the English attacks, however, such features are yet to be identified. The lack of human remains recovered thus far within the defined battlefield and the historical accounts stating that the dead were buried on the battlefield suggests a high probability for human remains in previously undisturbed areas of the battlefield.
 - **Key Landscape Characteristics** Although the first day of the battle is thought to have occurred within the land that is now held by the NTS, the extensive urban development has obscured the location of the second day of the battle and leaves the open ground along the A872 as some of the only parts of the battlefield that has seen minimal impact.
 - The removal of the woodland that provided Bruce's army with cover and the peat cutting and drainage that has removed the bogs that were present during the battle limits the ability to understand and appreciate the course of the battle further.
- **Battle of Sauchieburn (BTL 38)** (HES 2012a) – The Battle of Sauchieburn (11 June 1488) is significant as it resulted in the death of King James III who was fleeing from a defeat against his son, James, Duke of Rothesay, who was supported by rebellious Scottish nobles. This is one of the few battles where a reigning Scottish monarch was

killed as a result of a battle and saw James IV become king of Scotland (HES 2012a) – who was to become the last reigning monarch in Great Britain to die in battle at Flodden in 1513.

- **Special Qualities** The area thought to have seen most of the fighting is relatively undeveloped and as such there is a reasonable expectation of physical remains although only two possibly contemporary coins have been recovered thus far. The extensive arrow barrage during the battle suggests that physical evidence of these is likely.

The supposedly low mortality rate of the battle would suggest that human remains are unlikely to be recovered and the mill where James III is said to have been killed no longer stands and has been replaced by a farmhouse, a metal detector survey of which did not yield any results of note.

- **Key Landscape Characteristics** Little urbanisation has occurred on the site other than some areas that have been developed for housing and the presence of the M80, M9, and A872. The fact there is still lots of open land means that the hill to the north of the ridge where the battle took place, as well as the sloping land to the east and south towards the river Carron and the higher ridges to the east and west can still be appreciated and thus aid the understanding of the course of the battle.

5.5 Designated Heritage Assets Screened in for Detailed Assessment

Baseline analysis has been undertaken for this assessment of the designated heritage assets identified within the Outer Study Area in order to identify those with the potential for their cultural significance to be affected by setting change as a result of the Proposed Development.

Consideration has also been given to the potential for setting change to affect the cultural significance of designated heritage assets beyond the Outer Study Area.

While areas of the Antonine Wall WHS and its Buffer Zone have theoretical intervisibility with the Proposed Development, due to intervening infrastructure and the distance from the nearest turbine (9 km to the north-west) views of turbines from within the WHS would be limited.

In addition, given the distance from the nearest turbine of the Proposed Development; the WHS would be barely discernible in glimpsed views from limited areas within the WHS.

The presence of the Proposed Development during operation would therefore not adversely affect the Antonine Wall's OUV or the authenticity and integrity of the cultural significance of the Antonine Wall, which is predominantly derived from its physical remains (evidential and historical value), its local strategic and tactical relationships, and its relationship with the Roman Empire, its conquests and frontier systems.

Twenty-five scheduled monuments in the Outer Study Area have theoretical visibility with the Proposed Development. While the presence of turbines in views from these heritage assets towards the Proposed Development during operation may have the potential to affect the way they are experienced, the elements of their setting which contribute most to how they are understood and appreciated will not be affected.

This is not predicted to result in a change to how their settings contribute to their cultural significance or result in a significant effect in EIA terms.

Given their distance from the Proposed Development, and in many cases screening provided by existing infrastructure, changes to their setting during operation of the Proposed Development is not predicted to affect their cultural significance - largely derived from their architectural (evidential and aesthetic value) or historic (illustrative) interest - of the 757 listed buildings within the Outer Study Area.

While there is some potential for turbines to be visible in long distance glimpsed views from within the nine conservation areas with theoretical intervisibility with the Proposed Development, the presence of the Proposed Development will not affect their significance, setting or key views identified in the conservation area character appraisals.

The ZTV suggests that there will be some theoretical visibility of the Proposed Development from within the Inventory Garden and Designed Landscape of the Kings Knot (GDL00241) and Cowane's Hospital (GDL00400). However, the presence of the Proposed Development in the settings of these GDLs, and will not affect their key landscape features, special features or key views.

Further information as to why designated heritage assets identified within the Outer Study Area have been screened out of the assessment of effects is presented in Annex B.

The following designated heritage asset located within the Outer Study Area has been included for further assessment due to potential changes to its setting.

Stirling Castle (SM90291)

Description

Stirling Castle is an outstanding example of a medieval royal castle with later alterations and additions, one of the most important royal sites of medieval and early modern Scotland. It occupies a spectacular location on a volcanic outcrop commanding the upper Forth valley.

The castle comprises three main enclosures: the outer defences on the main line of approach, including the esplanade; the main enclosure at the summit of the rock, encircled by a curtain wall and including the Inner and Outer Closes; and the Nether Bailey to the north.

The principal buildings for royal occupation form a square known as the Inner Close enclosed by the King's Old Building, the Great Hall, the Chapel Royal and the Royal Palace.

Significance

Evidential value makes a high level of contribution to this asset's significance. It has been subject to recorded archaeological investigation since the 1920s, revealing high quality evidence especially through the highly rigorous excavations and interpretation carried out from the late 20th century onwards.

Multiple phases of development have been identified alongside a wealth of information regarding the life and death of the castle's occupants from at least the 12th century onwards. It makes a significant contribution to the understanding of medieval

royal castles, their chronology and development sequences as well as the cultural and social influences upon their development and occupation.

Historical value – The castle embodies Stirling's strategic importance as the key point controlling the vital route up the Forth valley and the crossing of the Forth. Its physical form and documentary evidence illustrate its consequent role in power, governance and military history stemming from this strategic pre-eminence.

The castle's phasing and physical form, starting with probable earth and timber defences, progressing to masonry, reflect historical advances in military design and technology.

Stirling has always been one of Scotland's principal royal sites, with close associations to key figures and events connecting Scottish, British and European history. The particular attention lavished on Stirling by the Stewart monarchs reflects this period's ideals of courtly life, political and social behaviour.

The evolution of its buildings from palace to post-medieval barracks, to a highly-curated visitor attraction demonstrates the changing role of royal, political and governmental management of the site over time.

Related to its historical value is its architectural value. The castle embodies a complex series of built phases, demonstrating the development of fortified and domestic architecture from the 12th to 17th centuries, culminating in the superb 16th-century Stewart royal lodgings.

The castle's role as a palace was developed primarily during the reigns of James IV, V and VI. Its accomplished architectural expression, influenced by the continental Renaissance, is most evident in the buildings lining the Inner Close: the Forework, the King's Old Building, Great Hall, Chapel Royal and Royal Palace.

These important architectural developments changed the emphasis of the site from one of defence only to one with a strong focus on display and status reflecting the Renaissance princely ideal.

They are of paramount importance to the understanding of secular architecture in the later medieval and early post-medieval periods in Scotland. The castle's military architecture demonstrates the flair and ingenuity of post-medieval military designers gradually replacing medieval walls with skilfully-designed defensive structures and outworks.

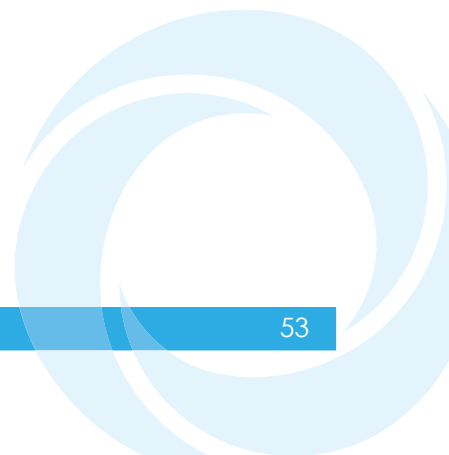
Aesthetic value – The castle's picturesque qualities have long been recognised in writings and works of art, intrinsically linked to its magnificent exploitation of its defensive site experienced against the scale and scenic character of the terrain in which it stands.

Social value – As a HES Property in Care, under ministry responsibility since 1906, the castle is one of the most popular visitor attractions in Scotland and has a strong presence in international perceptions of Scottish and regional history and identity. The city and castle of Stirling retain a close association which contributes strongly to their mutual identity and sense of community.

The British Army officially withdrew from the castle in 1964, but it remains closely associated with it through the presence of the Argyll and Sutherland Highlanders Regimental Museum.

Importance

In consideration of this heritage asset's designation and substantial contribution to the understanding of military and architectural history in an international context, this asset is of **high** importance.



6 Assessment

6.1 Introduction

This chapter considers potential effects in relation to the cultural significance of the heritage assets outlined in the previous baseline chapter.

A summary of the Proposed Development is provided above. Further detailed information in relation to the construction and operation of the Proposed Development can be found in Chapter 3 of the EIA Report Volume 2.

6.2 Influence of Cultural Heritage on the Design Process

Chapter 3 of the EIA Report outlines the site selection process that was undertaken by the Applicant for the Proposed Development, the approach taken to design and how, and why, the turbine layout and associated infrastructure has been modified during the iterative EIA process.

The design has been influenced by the reasons for refusal for a previous planning application within the Proposed Development Site. This included avoiding and minimising direct effects due to setting change to Stirling Castle and Kings Yett Cairn.

Further detailed information on the evolution of the design of the Proposed Development is presented in Chapter 3.

6.3 Potential Effects to Heritage Assets

6.3.1 Direct Effects Resulting from Physical Change

No direct effects resulting from physical change have been identified for heritage assets.

Following changes to the micro-siting allowance (embedded mitigation) and adoption of construction best practice presented in the Construction Environment Management Plan (CEMP; Appendix 15-1 Volume 3), including the clear demarcation of known heritage assets, it is anticipated that potential direct physical effects due to accidental damage or micro-siting during construction can be avoided.

While there is the potential for construction activities, such as groundbreaking, within the construction footprint of the Proposed Development to remove or truncate any previously unrecorded buried archaeological remains that may be present, the potential for the presence of previously unrecorded buried archaeological remains within areas of enclosed moorland and hilltops within the Proposed Development Site has been assessed to be **negligible to low**.

The Proposed Development Site has areas of peat identified as being up to c. 2.58m deep. The design development for the Proposed Development has sought to avoid interacting with areas of deep peat.

While there is potential for areas of deep peat to retain paleoenvironmental information, the potential for the construction of the Proposed Development to negatively affect the preservation of this record has been assessed to be **negligible**.

6.3.2 Direct Effects Resulting from Setting Change

This section identifies changes to the setting of heritage assets resulting from the presence of the Proposed Development during operation, and the potential effects on the cultural significance of heritage assets identified in the baseline, including how changes to the setting will affect how the current setting of heritage assets contributes to how they are understood, appreciated or experienced.

6.3.3 Designated Heritage Assets (High Importance)

King's Yett, Cairn (SM2580)

As can be seen from the photomontage presenting the view south from King's Yett Cairn towards the Proposed Development, all four turbines (T1 to T4) will be visible from the asset (refer to Figure 10.5 in EIA Report Volume 2). The nearest turbine (T4) will be located approximately 1.7km to the south.

While all four turbines will be set back beyond the coniferous trees forming a windbreak to the south of the minor road, the frequently used car park and existing overhead utilities on wooden poles, they will be prominent on the skyline. Turbines T1 and T3 will appear as part of the existing Craigengelt Wind Farm. Turbines T2 and T4 will be slightly to the east appearing to be separate to the existing Craigengelt Wind Farm.

The Proposed Development will result in a slight change in the setting of the cairn, bringing turbines closer to the asset, and adding new turbines to those that already form part of the asset's current setting and are currently present in the view from it to the south (see to Figure 10.5 in EIA Report Volume 2).

Turbines T2 and T4 will be present in views towards Dundaff Hill, adding to the existing limited intervisibility between the cairn and the high ground approximately 4.8km to the south. Given their landscape separation and lack of intervisibility, this asset and Dundaff Hill Mound (SM6553) do not share any further relationship beyond their obvious spatial relationship.

Given the assets' apparent deliberate positioning on the wide terrace sloping gently to the east and next to the King's Yett Burn watercourse to the north, the presence of the Proposed Development in the setting of the asset to the south will not affect how these elements of its setting continue to how it is appreciated and understood as a prehistoric funerary monument or its sense of place.

Turbines will not be present in view from the asset to the east towards Lewis Hill and glimpsed view of the Forth. The contribution of these views to the appreciation and understanding of the intentional distanced views from the asset, and the relationship between the asset and watercourses will not be affected.

While all four turbines will be present in the setting of the asset and be seen on the skyline in in-combination views towards the cairn from the northeast, turbines will appear to be set back beyond and in another landscape unit and seen in the context of the existing Craigengelt Hill Wind Farm (see Figure 10.6 in EIA Report 2).

The visible physical remains of the cairn will remain a prominent feature in this view. In addition, views from the cain to the east, rather than views towards the cairn from the northwest make a great contribution to the asset's cultural significance and how it is experienced.

The key elements of the cairn's setting that contribute most to how it is understood and appreciated as a prehistoric funerary monument, including its proximity to, and relationship with the King's Yett Burn, its position on the gently sloping east-facing slope which affords views over the heather moorland towards Lewis Hill and glimpsed view of the Fourth will not be affected by the presence of the Proposed Development in its setting.

The presence of four new turbines in the setting of the asset and in views to the south, will be a slight change, bringing turbines closer to the asset, and adding new turbines to those that already forming part of the asset's current setting. This will slightly alter the way the cairn is experienced.

The Proposed Development will not affect the evidential (scientific) and historical (illustrative) value of the physical remains of King's Yett Cairn, which contribute most to its cultural significance.

The presence of the Proposed Development during operation will be a slight change to the setting of the asset, affecting how it is experienced, however this will not affect the asset's overall cultural significance. This slight change to the way the setting of the heritage asset contributes to how it is experienced could lead to a level of impact judged to be small resulting in a **minor** potential level of effect in EIA terms.

Dundaff Hill, Mound (SM6553)

As can be seen from the photomontage presenting the view north from Dundaff Hill mound towards the Proposed Development, all four turbines (T1 to T4) will be visible from the asset (refer to Figure 10-7 in EIA Report Volume 2). The nearest turbine (T2) will be located approximately 2.1km to the north. The turbines will form two distinct pairs, comprising turbines T1 and T3 to the west and T2 and T4 to the east.

The Proposed Development will be set back from existing Craigengelt Hill Wind Farm, the distance is such that, during operation, the turbines T1 to T4 will appear to form part of the existing wind farm. The two pairs of turbines will be similarly grouped as the existing group of three turbines to the west (the eastern most of the existing Craigengelt Hill Wind Farm).

Turbines T1 to T4, will appear above the skyline at approximately the same height, giving the impression of one continuous line of turbines (see Figure 10-7 in EIA Report Volume 2).

Turbines T1 to T4 will be a noticeable addition to the setting of the asset and in views north, turbines already form part of the mound's current setting.

Although the Proposed Development will increase the prominence of turbines in that setting and in views to the north, the distinct landscape form to the north - Craigengelt Hill, Touchadam Muir and the Touch Hills - remain well-defined, recognisable and easily legible in the landscape (refer to Figure 10-7 in EIA Report Volume 2).

While a distraction, this key element of the mound's setting and views to the north over the gently rolling enclosure moorland that contribute to the appreciation and understanding of the asset's prominent position and intentional distanced views from the asset will remain.

The distance between the mound and King's Yett cairn (c. 4.3km), the low-lying position of the cairn, the scale of the visible physical remains, colour palette of the vegetation

and its current coniferous forest backdrop mean that the cairn itself is not discernible in views from Dundaff Hill mound.

While turbines T2 and T4 will be a noticeable distraction, they will be to the east of the line of sight between the mound and the King's Yett cairn, which will be maintained.

Due to the current setting of the asset within an open space surrounded by rotational commercial forest, the mound is not an obvious feature in the landscape until within relatively close proximity to it.

The visible physical remains of the mound will remain a prominent feature in in-combination views of the asset and the Proposed Development - below and at 2.1km to the north - in views to the north, when approaching downhill from the south.

While the prominence of turbines in the setting of the asset will increase during operation of the Proposed Development, the key elements of the asset's setting which contribute most to how it is understood and appreciated as a prehistoric funerary monument, including its prominent position on the north-facing slope of Dundaff Hill and the line of sight (but not intervisibility) with King's Yett cairn, will still be well-defined, recognisable and easily readable in the landscape.

The presence of the Proposed Development will result in a slight change to the way the mound is experienced.

Given that the setting of the asset already includes the existing Craigengelt Wind Farm, the asset's overall cultural significance will not be affected. In addition, the Proposed Development will not affect the evidential (scientific) and historical (illustrative) value of the physical remains of Dundaff Hill mound, which contribute most to its cultural significance.

The presence of the Proposed Development during operation will be a slight change to the setting of the asset, affecting how it is experienced, however this will not affect the asset's overall cultural significance. This slight change to the way the setting of the heritage asset contributes to how it is experienced could lead to a level of impact judged to be small resulting in a **minor** potential level of effect in EIA terms.

Dundaff Hill, Enclosure (SM7131)

During the operation of the Proposed Development, all four turbines (T1 to T4) will be present in the setting of, and visible from, the Dundaff Hill, Enclosure (refer to Figure 10-9 in EIA Report Volume 2).

The nearest turbine (T2) will be located approximately 2.6km to the north. Turbines T1 to T4 will be seen in-combination with the existing turbines associated with Craigengelt Wind Farm.

Turbines T1 to T4 will be located behind the intervening high ground of Dundaff Hill along the skyline currently crested by rotational commercial forest and will appear to be of a similar height above the skyline as the existing Craigengelt Wind Farm turbines.

While the Proposed Development will be a noticeable addition to the current setting of the asset extending turbines along the skyline to the east and in views from the asset to the north, turbines already form part of this asset's setting. Set back behind Dundaff Hill, the Proposed Development, in-combination with those of the existing Craigengelt Wind Farm, will not dominate the setting of the enclosure.

The asset's position on the edge of a terrace above the break of the steep southeast facing slope means that turbines will not become apparent in in-combination views of the enclosure until in close proximity to it.

Should the intention have been to approach the asset from the southeast, enabling a sense of anticipation and surprise, the presence of the Proposed Development in the setting of this enclosure, will not affect the way this element of the asset's setting is understood and appreciated, however there will be a slight change to how it is experienced.

The position of the asset would have provoked a similar sense of anticipation and surprise, had the intention have been to approach the enclosure from the northwest, over Dundaff Hill. This would have had the added element of introducing the enclosure in the context of the wide expansive views to the southeast and east. The presence of the Proposed Development in the setting of the asset, will not change how this element of the assets setting contributes to its cultural significance.

The asset's setting on Dundaff Hill above the Carron Valley, its relationship with the natural bedrock outcrop at its centre and other possibly contemporary assets, as well as the landforms to the southeast and east, and long views over the landscape, makes a positive contribution to how this asset is understood and appreciated as a possible prehistoric ritual or funerary monument.

This would not be affected by the Proposed Development.

The presence of the turbines in the setting of the enclosure and in views to the north, appearing behind and beyond Dundaff Hill, will result in a change to the way the enclosure is experienced, including when reaching the asset having approached uphill from the southeast.

However, this slight change will not affect the enclosure's overall cultural significance. In addition, the Proposed Development will not affect the evidential (scientific) and historical (illustrative) value of the physical remains of the enclosure, which contribute most to its cultural significance.

In summary, the presence of the Proposed Development during operation will be a slight change to the setting of the asset, affecting how it is experienced, however this will not affect the asset's overall cultural significance. This slight change to the way the setting of the heritage asset contributes to how it is experienced could lead to a level of impact judged to be small resulting in a **minor** potential level of effect in EIA terms.

Sauchie Craig, Fort (SM2120)

The nearest turbine (T4) will be located approximately 3.2km to the southwest of Sauchie Craig, Fort. The Proposed Development will be located behind the intervening high ground of Lewis Hill and established mature woodland running along the edge of Sauchie Craig screening turbines from the majority of the interior of the defended enclosure.

Only glimpsed views of the Proposed Development are predicted during operation.

The key elements of the asset's setting which contribute most to how it is understood and appreciated as a prehistoric defended enclosure consist of its dramatic cliff top position (which takes advantage of the natural defensive position of Sauchie Craig), views down and into Windy Yet Glen, wider views over the surrounding landscape to

northwest, and to a lesser extent towards the lowlands of the Forth floodplain to the north and northeast.

None of these key elements will be affected by the operation of the Proposed Development. In addition, the Proposed Development will not affect the evidential (scientific) and historical (illustrative) value of the physical remains of Sauchie Craigs fort, which contribute most to its cultural significance.

Changes to the setting of this heritage asset resulting from the operation of the Proposed Development will not affect its cultural significance, and therefore **no effects** resulting from the Proposed Development have been identified.

Touch Muir, Dun (SM2243)

While the Proposed Development will be present in the setting of this dun during operation, and turbines will be visible above the skyline in views to the south, the nearest turbine (T1) located approximately 4.5km to the south of the asset. Located behind the intervening high ground of the Touch Hills and Touch Muir, only blade tips will be glimpsed above the skyline.

In addition, the rotational commercial forestry at Touchdam Muir provides temporary screening which will obscure the Proposed Development from view.

The current setting of the asset, and views from the dun over the lower lying ground to the, south, east and north along Touch Burn will not be affected by the Proposed Development.

These views contribute to the appreciation and understanding of the asset's prominent position and intentional visibility over the landscape it sought to project authority over. Due to the low profile of the surviving visible physical remains of the dun is not now a prominent feature in the landscape.

As such the cairn is best experienced from the rocky outcrop on which the surviving remains of the dun are located. The presence of the Proposed Development will therefore not affect any in-combination views of the asset.

The key elements of the asset's setting which contribute most to how it is understood and appreciated as a dun, including its prominent location enabling views to and from the surrounding landscape, will not, therefore, be affected by the presence of the Proposed Development in the landscape. Glimpsed views of the turbines c.4.5km away will not change to the way the dun is experienced.

In addition, the Proposed Development will not affect the evidential (scientific) and historical (illustrative) value of the physical remains of Touch Muir dun, which contribute most to its cultural significance.

Changes to the setting of this heritage asset resulting from the operation of the Proposed Development will not affect its cultural significance, and therefore **no effects** resulting from the Proposed Development have been identified.

Wallstale, dun (SM2110)

Turbines T1 to T4 will be present above the skyline and in views to the southwest from Wallstale dun. The nearest turbine (T4) located approximately 5.0km to the southeast will be behind the intervening high ground of Sauchie Craig, with only blade tips glimpsed above the skyline.

Rotational commercial forestry along Moor Burn will provide temporary screening, which will obscure the Proposed Development in this view.

The current setting of the asset, and views from the dun over the lower lying ground to the west, south and east along Bannock Burn, will not be affected by the Proposed Development.

The elements of this asset's setting that contribute most to the appreciation and understanding of the asset's prominent position and intentional visibility over the surrounding landscape it sought to project authority over, will not be affected.

Due to the low profile of the surviving visible physical remains of the dun and the asset's current mature woodland setting, the dun is not a prominent feature in the landscape and not visible from the unnamed road which runs approximately 0.2km south of the asset.

As such, the cairn is best experienced from the rocky outcrop on which the dun is located. The presence of the Proposed Development does not affect any in-combination views of the asset.

The key elements of the asset's setting which contribute most to how it is understood and appreciated as a dun, including its once prominent position enabling views to and from the surrounding landscape, will not be affected by the presence of the Proposed Development in its setting.

The presence of turbines c.5km away will not change to the way the dun, whose current setting includes mature woodland, is experienced. In addition, the Proposed Development will not affect the evidential (scientific) and historical (illustrative) value of the physical remains of Wallstale, dun, which contribute most to its cultural significance.

In summary, the distanced glimpses of the turbines in views to the southwest will not change to the way the dun's setting contributes to its cultural significance, including how it is experienced, given how heavily screened turbines are by topography and forestry, including that surrounding the asset.

Changes to the setting of this heritage asset resulting from the operation of the Proposed Development will not affect its cultural significance, and therefore **no effects** resulting from the Proposed Development have been identified.

Castlehill, dun (SM177)

Turbines T1 to T4 will be present in the setting of this asset, and visible above the skyline in views to the southwest. The nearest turbine (T4) will be located approximately 3.7km to the southeast. Turbines will be seen as an even spread and at a similar height across the skyline.

The current setting of the asset, and views from the dun over the lower lying ground to the southwest will not be affected by the Proposed Development. The elements of this asset's setting that contribute most to the appreciation and understanding of the asset's prominent position and intentional visibility over the surrounding landscape will not be affected.

Due to the low profile of the dun's visible physical remains, disturbance from previous land use near the asset, and current commercial forest to the north and east, the dun is not a prominent feature in the landscape. As such the cairn is best experienced from the rocky outcrop on which the surviving remains of the dun are located.

The key elements of the asset's setting which contribute most to how it is understood and appreciated as a dun, including its once prominent position enabling views to and from the surrounding landscape, will not be affected by the presence of the Proposed Development in its setting.

The presence of turbines on the skyline c3.7km away will not change the way the dun, whose current setting includes rotational commercial forest and the physical remains of the vehicle training site, is experienced.

In addition, the Proposed Development will not affect the evidential (scientific) and historical (illustrative) value of the physical remains of Castlehill, dun, which contribute most to its cultural significance.

Changes to the setting of this heritage asset resulting from the operation of the Proposed Development will not affect its cultural significance, and therefore **no effects** resulting from the Proposed Development have been identified.

Stirling Castle (SM90291)

The four proposed turbines (T1 to T4) will be appreciable from points on the west and southwest sides of the castle, principally wall walks and parapets at:

- the Queen Anne Battery;
- the Queen Anne Garden/bowling green;
- the south face of the inner gate tower;
- the Ladies' Lookout;
- the Douglas Garden, north of the King's Old Building;
- the Prince's Tower walkway on the south side of the Royal Palace, and
- a selection of interior spaces with fenestration facing west or southwest, within the Royal Palace, the old Chapel/kitchens range and the King's Old Building (Argyll and Sutherland Highlanders Museum).

The Proposed Development may also be appreciable in combination with the castle from limited points.

However, the site and the Proposed Development cannot be appreciated from within, or viewing out from the key assets which contribute to the setting of the castle:

- King's Park Conservation Area (CA220),
- Kings Knot Inventory Garden and Designed Landscape (GDL00241) and
- The Royal Gardens including King's Knot scheduled monument (SM90288).

The Proposed Development Site cannot be appreciated from Stirling Town and Royal Park Conservation Area except from Ladies' Rock, the pinnacle in the centre of the Valley Cemetery, south of and below the castle.

The Proposed Development Site only contributes to the castle's significance in a general way as part of its scenic context, i.e., the panorama of hills and landscape to the southwest appreciable from the castle.

The Proposed Development Site does not form part of the key defensive objective of the castle, specifically the control of the strategically important route up the Forth valley and the crossing of the Forth.

Outlook from the castle would also allow general surveillance of movement to and from Stirling via the wider landscape in all directions, but the Proposed Development Site only forms one very small element in this more general defensive setting, and is located away from its principal defensive focus to the southeast.

Similarly, the Proposed Development Site lies at considerable distance (8.4km from the closest turbine), well beyond the tactical requirements of contemporaneous military surveillance, and prior to the invention and availability of telescopes.

The important architectural developments of the reigns of James IV, V and VI changed the emphasis of the castle from one of defence only to one with a strong focus on display and status reflecting Renaissance ideals.

The interior and fenestration of the King's Old Building have been heavily altered since its construction and we no longer understand how it was originally intended to be laid out. However, it is thought to have contained grand spaces, some of which may have had an outlook to the west and southwest.

The Royal Palace survives more authentically in its original form and layout. The suites of principal audience rooms for the King and Queen extend around the almost square plan at *piano nobile* (raised ground floor) level. The most important rooms are on the east side of the building with aspects onto the Lion's Den, Inner and Outer Closets only (i.e. inward looking to courtyard spaces within the built-up area of the castle).

The Queen's Inner Chamber and the Prince's Tower are the only principal internal spaces with windows looking towards the site. Archaeological analysis of the building has revealed it likely that there were once viewing decks or galleries attached to the external face of the Royal Palace west elevation.

These galleries, wall walks and external amenity spaces of the Queen Anne Garden and Ladies' Lookout, all with an outlook across the King's Park, indicate that enjoyment of the castle's outlook over the landscape would have formed part of the experience of visitors to or residents of the castle while it was in active use as a Royal Palace.

However, the experience and understanding of this historic relationship with the wider landscape can only be appreciated in the present day in highly altered form, owing to the substantial encroachment of modern development and land management, principally:

- The extensive suburbs of Stirling;
- The presence of modern transport infrastructure (the M9 and local road network);
- Outlying farm and steading developments;
- The redevelopment of the former King's Park as a golf course and
- the modern character of farming and forestry patterns.

The cumulative impact of these changes on the Royal Park is acknowledged in the castle's Statement of Significance (HES 2020f, p.16). The castle's current strong focus as a visitor attraction and the levels and nature of activity which accompany that use also significantly detract from the ability to experience the asset as it would have been when in use as a palace.

Current experience and understanding of the castle as it would have been in the late medieval and earlier post-medieval periods relies heavily on in-situ interpretation, such as the information boards at the Queen Anne Garden and Ladies' Lookout, indicating

that the historic relationship is not readily appreciable without that interpretation being made available.

The relationship between the castle and its wider landscape surroundings in its current state, including the Proposed Development Site, therefore makes only a very small contribution to its overall significance.

Viewpoint LV8, positioned on the parapet wall walk at the Queen Anne Garden (refer to Figure 5-2-8 of the EIA Report, Volume 2) shows the Proposed Development will appear to form a cluster of turbines in combination with the existing Craigengelt and Craiggannet wind farms.

In clear conditions the cluster will be visible, at a substantial distance, occupying a small section on the horizon above the King's Knot, with modern built development, roads and the Stirling Golf Club course intervening in the middle ground.

The four proposed turbines will appear slightly forward of and higher than the existing cluster. The proposed layout will slightly increase the southward extent of the cluster through the positioning of turbine 2. However, this slight widening serves to avoid increasing the apparent density of the cluster.

The resulting appearance creates a slightly more prominent effect than the existing cluster, which may draw attention slightly more strongly to the affected part of the horizon than at present.

However, the current experience of the wider landscape as general visual context to the castle, and the minor contribution of the relationship of the site to the significance of the castle, are materially changed by this only to the most minor level. The effect of existing modern development around Stirling will remain far more prominent, extensive and distracting than the Proposed Development.

The understanding of the key strategic, defensive and offensive role of the castle, its topographical dominance, its scenic prominence in the landscape, or the prowess and historical importance of its architectural expression, remain absolutely unaffected.

Any harm to its significance is therefore at a very low level, leaving all of its principal aspects of significance unchanged.

The presence of the Proposed Development during operation will be a slight change to the setting of the asset, affecting how it is experienced, however this will not affect the asset's overall cultural significance. This slight change to the way the setting of the heritage asset contributes to how it is experienced could lead to a level of impact judged to be **small** resulting in a **minor** level of effect in EIA terms.

Non-designated Heritage Assets

Buckie Burn Sheiling-Hut (SC HER Ref: 3379; low importance)

During the operation of the Proposed Development, all four turbines (T1 to T4) will be present in the setting of Buckie Burn Sheiling-Hut. The nearest turbine, T2, will be located approximately 270m to the southeast and T4 will be c. 380m to the north.

The presence of turbines in the immediate surroundings of Buckie Burn Sheiling-Hut will be a marked change in the setting of the asset.

The key elements of this asset's setting which contribute most to how it is understood and appreciated as the remains of temporary accommodation for those tending to

livestock in the summer months are the open moorland, relationship between the enclosure, sheltered location and proximity of an unnamed watercourse.

These will still be readily appreciated and understood. The presence of the Proposed Development will affect how these the asset is experienced. However, the operation of the Proposed Development will not affect the evidential (scientific) and historical (illustrative) value of the asset from which its cultural significance is largely derived.

Changes to the setting of the Buckie Burn Shieling-Hut due to the presence of the Proposed Development will be a notable change to the setting of this asset, however this will not affect the asset's overall cultural significance. This slight change to the way the setting of the heritage asset contributes to how it is experienced could lead to a level of impact judged to be small resulting in a **minor** level of effect in EIA terms.

Buckie Burn Building (SC HER Ref: 3380; low importance)

During the operation of the Proposed Development, all four turbines (T1 to T4) will be present in the setting of this heritage asset. The nearest turbine (T2) will be located approximately 300m to the north and T4 will be c. 380m to the north.

While the presence of turbines in the setting of the asset will be a change in the setting of the asset. However, wind farm infrastructure, including access tracks and turbines, associated with existing Craigenfelt Wind Farm already form part of the setting for this asset.

The key elements of this asset's setting which contribute most to how it is understood and appreciated as a farmstead or the remains of temporary accommodation for those tending to livestock in the summer months, including the open moorland, sheltered location and proximity of an unnamed watercourse, will remain readily appreciated and understood.

Given the existing Craigenfelt Wind Farm in the current setting of this asset, the presence of the Proposed Development will not affect how this asset is experienced. In addition, the operation of the Proposed Development during operation will not affect the evidential (scientific) and historical (illustrative) value of the asset from which its cultural significance is largely derived.

Changes to the setting of this heritage asset resulting from the operation of the Proposed Development will not affect its cultural significance, and therefore **no effects** resulting from the Proposed Development have been identified.

6.3.4 Cumulative Effects

A full list of operational, consented and application submitted developments considered in the cumulative effects assessment is identified in Chapter 5 of the EIA Report Volume 2.

While the potential for cumulative effects resulting from setting change have been considered, given that the potential for setting change to significantly effect a heritage asset diminishes with distance, significant cumulative effects, including those resulting from in-combination views beyond the Outer Study Area are not predicted.

Cumulative effects resulting from setting change have been considered in relation to the developments identified in Table A10-5. These developments fall within the Inner and Outer Study Areas for the Proposed Development.

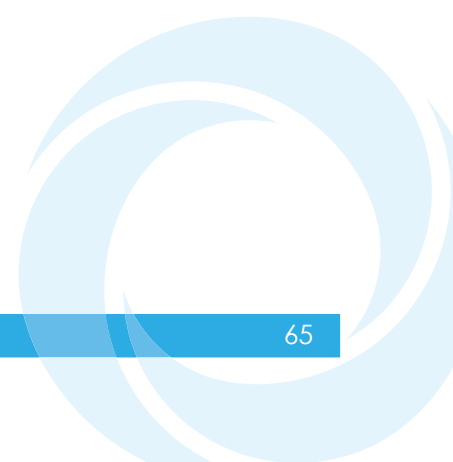
Table A10-5: Operational, Consented and Application Submitted Wind Farms within the Inner and Outer Study Areas

Distance (km)	Name	Status
1	Craigengelt	Operational
3	Craignannet	Operational
5	Earlsburn	Operational
7	Kingsburn (Earlsburn North)	Operational
10	Tod Hill	Operational
7	Shelloch	Consented
5	Earlsburn Extension	Application Submitted

No significant cumulative effects to heritage assets have been identified resulting from the operation of the Proposed Development in-combination with the developments identified in Table A10-5.

For the avoidance of doubt, while the Proposed Development will be visible in combination with the existing Craigengelt-Craignannet cluster from Stirling Castle, these developments are considered to be part of the baseline receiving environment.

The addition of the Proposed Development will not elevate the level of effect beyond minor for the purposes of EIA, arising either from the Proposed Development in its own right, or from the cluster as a whole.



7 Conclusions

7.1 Potential Direct Effects Resulting from Physical Change

No direct effects to heritage assets resulting from physical change have been identified.

Construction activities for the Proposed Development have the potential to remove or truncate any previously unrecorded buried archaeological remains that may be present within the footprint of the Proposed Development. However, the potential for previously unrecorded archaeological remains within areas of open moorland and hilltops within the Proposed Development Site has been assessed to be **negligible to low**.

The Proposed Development Site has areas of peat identified as being up to c. 2.58m deep. The design development for the Proposed Development has sought to avoid interacting with areas of deep peat. While there is potential for areas of deep peat to retain paleoenvironmental information, the potential for the construction of the Proposed Development to negatively affect the preservation of this record has been assessed to be **negligible**.

7.2 Potential Direct Effects Resulting from Setting Change

No significant effects in EIA terms have been identified for heritage assets as a result of potential direct effects resulting from setting change.

The following potential non-significant direct effects resulting from setting change for four designated heritage assets of **high** importance have been identified.

The presence of the Proposed Development during operation will slightly change the way the following designated heritage assets are experienced:

- King's Yett, Cairn (SM2580) - changes to the setting of the King's Yett, Cairn as a result of the presence of the turbines to the south will affect the way the cairn is experienced but will not affect its overall cultural significance. This will lead to a level of impact judged to be **small** resulting in a **minor** potential level of effect in EIA terms;
- Dundaff Hill, Mound (SM6553) - changes to the setting of this heritage asset during operation of the Proposed Development will slightly alter the way the asset is experienced within the landscape. This will lead to a level of impact judged to be **small** resulting in a **minor** potential level of effect in EIA terms;
- Dundaff Hill, Enclosure (SM7131) - changes to the setting of this prehistoric ritual or funerary monument during operation of the Proposed Development will slightly alter the way the asset is experienced within the landscape. This will lead to a level of impact judged to be **small** resulting in a **minor** potential level of effect in EIA terms;
- Stirling Castle (SM90291) - The presence of the Proposed Development during operation will be a slight change to the setting of the Stirling Castle, affecting how it is experienced, however this will not affect the asset's overall cultural significance. This will lead to a level of impact judged to be **small** resulting in a **minor** potential level of effect in EIA terms.

One non-designated heritage asset, Buckie Burn Sheiling-Hut (SC HER Ref: 3379; low importance), has been identified as experiencing setting change.

While this has the potential to affect the contribution its setting makes to how they are experienced, the elements of this asset's setting which contributes most to its cultural significance, and the evidential and historical value of this asset's physical remains will not be affected.

This **small** change to the way the setting of the asset contributes to how it is experienced will lead to a **minor** potential level of effect in EIA terms.

Table 6-1 provides a further summary of effects to heritage assets.

7.3 Potential Cumulative Effects

No potential cumulative effects on heritage assets have been identified.

7.4 Mitigation

The Outline Construction Environmental Management Plan (Outline CEMP) for the Proposed Development identifies construction best practice mitigation for the historic environment.

Measures which may be adopted include the implementation of a working protocol should previously unrecorded archaeological features be discovered, including the appointment of an Archaeological Clerk of Works (ACoW).

The evolution of the design process has sought to reduce the potential for impacts on heritage assets resulting from setting change.

For proposed developments of this sort, it is difficult to fully mitigate the impacts to heritage assets resulting from setting change beyond those changes to the design identified as the Proposed Development evolves. No specific mitigation to reduce the potential effects of setting change to heritage assets as been identified.

No specific mitigation for potential physical effects during construction on previously unrecorded heritage assets, including buried archaeological remains, has been proposed. The CEMP for the Proposed Development identifies construction best practice measures for protecting the historic environment, including the exclusion of known assets and areas of elevated archaeological potential from the micro-siting allowance.

Measures which may be adopted include the implementation of a working protocol should previously unrecorded archaeological features be discovered, and exclusion fencing to protect heritage assets during construction.

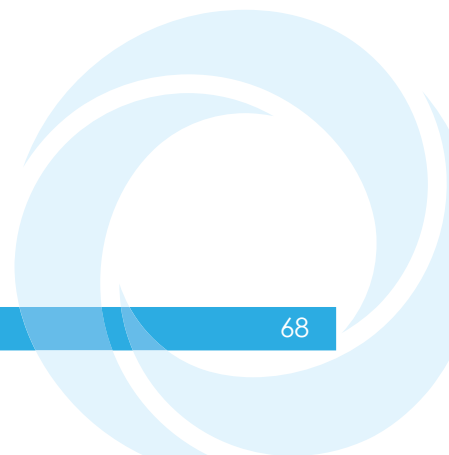
The evolution of the design process has sought to reduce the potential for impacts on heritage assets resulting from setting change. This has included a reduction in the number of turbines and their re-siting, and as such this is considered to be embedded mitigation.

For developments of this sort, it is difficult to fully mitigate impacts to heritage assets resulting from setting change during the operation beyond those changes to the design and layout identified as the Proposed Development evolves. Therefore, no specific mitigation to reduce the potential effects to heritage assets due to setting

change resulting from the operation of the Proposed Development have been identified.

Table 6-4: Summary of Effects to Heritage Assets

Heritage Asset Name and Reference	Importance	Level of Impact	Significant of Effect
King's Yett Cairn (SM2580)	High	Small	Minor
Dundaff Hill, Mound (SM6553)	High	Small	Minor
Dundaff Hill, Enclosure (SM7131)	High	Small	Minor
Stirling Castle (SM90291)	High	Small	Minor
Buckie Burn Sheiling-Hut (SC HER Ref: 3379)	Low	Small	Minor



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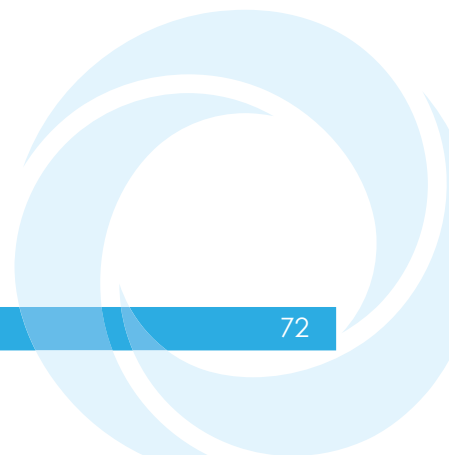
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Annex A: Legislation and Policy Context

A.1. Legislative and policy

Legislation

Scheduled Monuments are, by definition, of national importance and are protected by law under the Ancient Monuments and Archaeological Areas Act 1979 (as amended). It is a criminal offence to damage a Scheduled Monument, and Scheduled Monument Consent must be obtained from Historic Environment Scotland (HES) before any works affecting a Scheduled Monument may take place.

Listed Buildings are protected under the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (as amended) and are recognised to be of special architectural or historic interest. Under the Act, planning authorities are instructed to have special regard to the desirability of preserving a Listed Building, its setting, or any features of special architectural or historic interest which it possesses (Planning (Listed Buildings and Conservation Areas) Act 1997, Section 14(2)). Additional controls over demolition and alteration exist through the requirement for Listed Building Consent to be gained before undertaking alteration or demolition on a Listed Building. Section 64 states that, in considering applications affecting Conservation Areas, "special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area".

National policy

The following national policy is relevant to this assessment.

- Planning Advice Note (PAN) 2/2011: Planning and Archaeology (PAN2/2011) (Scottish Government 2011);
- National Planning Framework 4 (NPF4) (Scottish Government 2023);
- Historic Environment Policy for Scotland (HES 2019); and
- HES Historic Environment Circular 1 (HES 2016).

PAN 2/2011: Planning and Archaeology provides advice on archaeological remains within the planning process. It sets out the requirement to protect archaeological remains in a manner which is proportionate to the relative value (importance) of the remains and of the developments under consideration.

Policy 7 of NPF4 concerns various aspects of the historic environment. Those relevant to this assessment include:

- Policy 7(a) states that "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."

- Policy 7(d) – (h) relate to conservation areas including the protection for the setting of conservations areas.
- Policy 7(h) states that "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."
- Policy 7(i) deals with Gardens and Designed Landscapes.
- Policy 7 (j) deals with Historic Battlefields Key considerations are cultural significance, key landscape characteristics, physical remains and 'special qualities'.
- Policy 7 (l) deals with World Heritage Sites.
- Policy 7(o) states that "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. 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."

The Historic Environment Policy for Scotland sets out the six principles of how the historic environment should be managed and looked after, and forms part of a range of documents that inform decisionmakers in the Scottish planning system.

The Historic Environment Circular 1 describes the requirements of secondary legislation relating to the Historic Environment Scotland Act 2014 and HES's role in relation to listing and scheduling, consents and appeals.

Local Policy

The Stirling Local Development Plan (SLDP)(Stirling Council 2018) was adopted in October 2018 and sets out the policies on development and land use within Stirlingshire. The key relevant policy in relation to the historic environment is Primary Policy 7: Historic Environment. The policies most relevant to this Proposed Development comprise:

- Policy 7.1 – identifies that there will be a presumption against development that would have an adverse effect on a scheduled monument or on the integrity of its setting. It further states that for non-designated heritage assets evaluation may be required to determine the importance of an asset, its sensitivity to development and appropriate mitigation, and that an appropriate level of mitigation in the form of archaeological or historic building recording should be agreed with SC.
- Policy 7.2 – states that development outwith a conservation area that will impact the conservation area, shall preserve or enhance its character, appearance and setting.
- Policy 7.3 – identifies that the layout, design, materials, scale, siting and use of any development must preserve the character of listed building and their setting.

- Policy 7.8 – relates to developments affecting battlefields and gardens and designed landscapes. Development which would have a significant adverse effect upon the archaeology, landscape features, character and setting of sites listed in the Inventory of Historic Battlefields will not be supported unless it can be demonstrated that the overall integrity and character of the battlefield area will not be compromised. Development affecting inventory gardens and designed landscapes shall not impact adversely upon their character, important views to, from and within them, or upon the site or setting of component features which contribute to their value.

Supplementary guidance on battlefields is provided by SC (2018). This document provides details of the battlefields located within the Local Authority Area and defines areas of particular sensitivity. Chapter 6 also states that “the intention behind the Inventory is not to preserve the entirety of the defined are in situ in perpetuity, but rather to identify its key components and to manage change in a development context. “

Annex B: Designated Heritage Assets Assessment Tables

Table B.1: Assessment Table for Scheduled Monuments within the Inner (bold) and Outer Study Areas

Designation Reference	Heritage Asset Name	Theoretical Number of Turbines Visible	Screened In / Out	Reasoning
SM7016	Murrayshall Farm, dun 200m SE of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM7017	Castlehill, hut circle 350m S of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM6553	Dundaff Hill, mound 550m NE of summit	4	In	Intervisibility with the Proposed Development resulting in potential setting change.
SM7131	Dundaff Hill, enclosure 950m NNW of Carron Bridge	4	In	Intervisibility with the Proposed Development resulting in potential setting change.
SM2580	King's Yett, cairn 300m W of	4	In	Intervisibility with the Proposed Development resulting in potential setting change.
SM3395	Glenhead, cultivation terraces SE of	2 - 4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development in views to the southwest, the key elements of this heritage asset's setting that contribute most to how it is understood, appreciated and experienced as a place of agricultural activity, including the spatial and functional relationship between the physical remains of the terraces and the adjacent agricultural land and Buckieburn will not be affected.
SM3680	Wallstale, limekilns 100m W of	1 - 3	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development in views to the southwest, the key elements of this

				heritage asset's setting that contribute most to how it is understood, appreciated and experienced as a place of industrial activity, including the spatial and functional relationship between the physical remains of kilns and access to limestone and the quarries to the north, will not be affected.
SM4599	Woodside, homestead 600m SSW of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM4278	Sir John de Graham's Castle	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM177	Castlehill Wood, dun 780m S of Touch Mollar	4	In	Intervisibility with the Proposed Development resulting in potential setting change.
SM2110	Wallstale, dun	1 - 3	In	Intervisibility with the Proposed Development resulting in potential setting change.
SM2120	Sauchie Craig, fort, North Third Reservoir	1 - 4	In	Intervisibility with the Proposed Development resulting in potential setting change.
SM2121	Wester Craigend, dun 300m W of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM2243	Touch Muir, dun	4	In	Intervisibility with the Proposed Development resulting in potential setting change.
SM3815	Carrickstone, Roman altar, 400m W of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM3099	Broch, rock shelter and cup marked rocks, 165m W of Leckie House	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM4117	Hollandbush, limekilns 100m W of	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the southwest, views of the turbines will be limited by the current surrounding commercial forest. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and

				experienced as lime kilns, such as access to limestone and communication links, will not be affected.
SM2540	King's Park, cup & ring mark	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the southwest, views of the turbines will be limited by surrounding commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced, which may include the views to the Ochil Hills, Trossachs and Gargunock Hills, will not be affected.
SM456	Braes, fort 130m WNW of	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west northwest, views of the turbines will be limited by surrounding commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a fort, such as its elevated position and access to fresh water via the Avon Burn, will not be affected.
SM1732	Common homestead Hill,	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west, views of the turbines will be almost entirely obscured by the surrounding landscape and commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as an Iron Age homestead, such as its rural and agricultural setting which reflects its prehistoric setting, will not be affected.
SM2381	Myot Hill, fort	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the northwest, views of the turbines will be distant and limited by surrounding commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated or experienced as a hill fort, such as its prominent hilltop position with views over lower land, will not be affected.
SM2566	Gillies Hill, fort	1 – 4	Out	The setting of this heritage asset does not extend as far as the Proposed

				Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the southeast, views of the turbines will be distant and limited by surrounding commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a hill fort, such as its prominent hilltop position with views over lower land, will not be affected.
SM7085	Fintry Castle, remains of	2 – 3	Out	The setting of this heritage asset does not extend as far as the Proposed Development to the east-northeast. While this heritage asset is identified as having theoretical visibility with the Proposed Development, views of the turbines will be no more than distant glimpses of the blades. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a castle, such as its elevated position and access to fresh water via the Cammal Burn to its east and Endrick Water to its south, will not be affected.
SM90288	Stirling, Royal Gardens including King's Knot	0 – 4	Out	The setting of this heritage asset does not extend as far as the Proposed Development to the southwest. While this heritage asset is identified as having theoretical visibility with the Proposed Development, views of the turbines will be no more than distant glimpses of the blades. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a the royal gardens, such as its spatial and functional relationship with the castle, will not be affected.
SM1754	Stirling, town wall & bastion & Port Street Bastion at 44 Bastion Wynd	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development to the south-west. While this heritage asset is identified as having theoretical visibility with the Proposed Development, views of the turbines will be no more than glimpses that will be limited by existing infrastructure. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced a town wall, such as its spatial association with Stirling and other historic buildings, will not be affected.
SM6929	Doghillock, dun 700m N of	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west northwest, views of the turbines will be distant and limited by surrounding commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and

				experienced as a dun, such as its rural and agricultural setting, thus reflecting its prehistoric setting, will not be affected.
SM90289	Stirling, Mar's Wark, uncompleted residence	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the southwest, views of the turbines will be distant and limited by surrounding commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as the uncompleted townhouse for the Earl of Mar, Governor of Stirling Castle, such as its urban location and spatial relationship with the castle, will not be affected.
SM90286	Stirling, Argyll Lodging, house	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the southwest, views of the turbines will be distant and limited by surrounding buildings. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a town house, such as its urban location and spatial relationship with other historic buildings, will not be affected.
SM2492	Todholes, cairn 1000m NNE of	1	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the east northeast, views of the turbines will be heavily limited by surrounding commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a cairn, such as its possible spatial relationship with SM2491 and access to fresh water with Endruck Water to its east, will not be affected.
SM4491	Todholes, cairn 1300m NNW of	1 – 2	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the east northeast, views of the turbines will be heavily limited by surrounding commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a cairn, such as its possible spatial relationship with SM2492 and access to fresh water with Endruck Water to its east, will not be affected.
SM2719	Waterhead, two	1	Out	The setting of this heritage asset does not extend as far as the Proposed

	standing stones 800m ENE of			Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the northeast, views of the turbines will be heavily limited by surrounding commercial forestry. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as standing stones, such as its position on a raised bit of land and the fresh water that surrounds the asset (i.e. the River Carron to its north, an unnamed burn to its east and Bin Burn to its west) will not be affected.
SM2584	Balcastle Farm, motte 250m SSW of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM2547	Brokencastle, dun 600m NE of Dasher	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM2572	Craigstone Wood, Castle Hill, motte E of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM608	Double Craigs, hut circle	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM2579	Easter Auchincloch, fort 180m NNE of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM6766	Forth and Clyde Canal: Auchinstarry Farm - Castlecary	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM2561	Keir Knowe, motte 460m W of Easter Glins	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM2554	Leckie Burn, bridge 230m WSW of Watson House	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM90290	Stirling Old Bridge	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.

SM8264	Stirling, remains of former bridge to N of Stirling Old Bridge	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM6481	Plean Farm, ring ditch 800m SE of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM2556	Craigton, dun 460m N of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM7009	Dasher, fort 600m ENE of	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
SM4151	West Plean Colliery No.3 Pit, coke ovens	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west, views of the turbines will be no more than glimpses of the blades. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as coke ovens, such as access to coal and communication links, will not be affected.
SM90055	Cambuskenneth Abbey, Cambuskenneth	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the southwest, views of the turbines will be very distant. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as an abbey, such as the spatial relationship between it and its ancillary buildings and position near the River Forth, will not be affected
SM6480	Plean Cottages, palisaded enclosure 350m SSE of	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west, views of the turbines will be very distant. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a prehistoric ring ditch, such as the access to fresh water via Sauchinford Burn and its possible temporal and thus spatial relationship with SM6548, SM6482 and SM6479 will not be affected.
SM6482	Plean Farm,	4	Out	The setting of this heritage asset does not extend as far as the Proposed

	palisaded enclosure 150m NE of			Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west, views of the turbines will be very distant. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a prehistoric ring ditch, such as the access to fresh water via Sauchinford Burn and its possible temporal and thus spatial relationship with SM6479, SM6548 and SM6480 will not be affected.
SM6548	Sauchinford Cottages, palisaded enclosure 100m ENE of	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west, views of the turbines will be very distant. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a prehistoric palisaded enclosure, such as the access to fresh water via Sauchinford Burn and its possible temporal and thus spatial relationship with SM6479, SM6482, and SM6480 will not be affected.
SM6479	Sauchinford Cottages,ring ditch 300m SSE of	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west, views of the turbines will be very distant. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a prehistoric ring ditch, such as the access to fresh water via Sauchinford Burn and its possible temporal and thus spatial relationship with SM6548, SM6482 and SM6480 will not be affected.
SM1731	Carr's Hill,fort, Torwood	0 – 4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west northwest, views of the turbines will be very distant. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a hill fort, such as its prominent hilltop position with extensive views over lower land, will not be affected.
SM2217	Tor Wood, Roman road	0 – 4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the west northwest, views of the turbines will be very distant. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a Roman road, such as the destinations located along its path, will not be affected.

SM7010	Carleatheran, cairn at summit, Gargunnoch Hills	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development to the southeast, views of the turbines will be very distant and be far less obvious than already existing turbines. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a cairn, including its possible spatial relationship with human remains other cairns and its prominent hilltop position, will not be affected.
SM90291	Stirling Castle	0 – 4	In	Intervisibility with the Proposed Development resulting in potential setting change.

Table B.2: Assessment Table for Listed Buildings within the Inner Study Area

Given the number of listed buildings within the Outer Study Area (757), the majority of which are located within the City of Stirling and its conurbation, and that all 757 have been screened out for further assessment listed buildings identified within the Outer Study Area have not been included here.

Designation Reference	Heritage Asset Name	Category	Theoretical Number of Turbines Visible	Screened In / Out	Reasoning
LB1964	Old Bridge Faughlin Burn	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
LB1965	New Carron Bridge	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
LB12990	Bentend Steading, Nr Carron Bridge	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
LB15272	Buckieburn Church	B	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical

					visibility with the Proposed Development in views to the north, these views will be screen by commercial forest. The key elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a church, including its surrounding drystone wall enclosure, will not be affected.
LB15275	Milnholm Hatchery	A	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development in views to the west, these views will be restricted by commercial forest and do not contribute to how the asset is understood, appreciated and experienced. In addition, the key elements of this asset's setting that contribute most to its cultural significance as a fish hatchery, including its access to a water, will not be affected.
LB15276	Milnholm Hatchery, Footbridge Over Loch Coulter Burn	C	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. The elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a footbridge, which comprise the Coulter Burn and the spatial and functional relationship with other elements of the Hatchery (LB15275) will not be affected.
LB15288	Lochend Farm	C	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development in views to the southwest, the elements of this asset's setting that contribute most to how it is understood, appreciated or experienced as a farmhouse, which comprise the functional relationship with the surrounding agricultural land and buildings will not be affected.
LB15299	Old Sauchie (Tower House) Including The Greathall, The Chambers And 1-5 (Inclusive Nos) The Stables And The Cottars	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.

	With Adjoining Walled Garden, And Boundary Walls				
LB15299	Old Sauchie (Tower House) Including The Greathall, The Chambers And 1-5 (Inclusive Nos) The Stables And The Cottars With Adjoining Walled Garden, And Boundary Walls	B	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development in views to the south, the turbines might be entirely obscured by the topography and woodland. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a tower house, including its rural environment may not be affected.
LB15299	Old Sauchie (Tower House) Including The Greathall, The Chambers And 1-5 (Inclusive Nos) The Stables And The Cottars With Adjoining Walled Garden, And Boundary Walls	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
LB15299	Old Sauchie (Tower House) Including The	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.

	Greathall, The Chambers And 1-5 (Inclusive Nos) The Stables And The Cottars With Adjoining Walled Garden, And Boundary Walls				
LB15299	Old Sauchie (Tower House) Including The Greathall, The Chambers And 1-5 (Inclusive Nos) The Stables And The Cottars With Adjoining Walled Garden, And Boundary Walls	B	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development in views to the south, the turbines might be entirely obscured by the topography and woodland. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as the chamber, including its walls and internal green space, may not be affected.
LB15299	Old Sauchie (Tower House) Including The Greathall, The Chambers And 1-5 (Inclusive Nos) The Stables And The Cottars With Adjoining	B	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development in views to the south, the turbines might be entirely obscured by the topography and woodland. In addition, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a great hall may not be affected.

	Walled Garden, And Boundary Walls				
LB15299	Old Sauchie (Tower House) Including The Greathall, The Chambers And 1-5 (Inclusive Nos) The Stables And The Cottars With Adjoining Walled Garden, And Boundary Walls	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
LB15300	Dovecot, Old Sauchie	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
LB15301	Sundial	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
LB15302	Sundial	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
LB15306	Howietoun Fishery	A	4	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development in views to the west, the elements of this asset's setting that contribute most to how it is understood, appreciated and experienced as a fishery, including the embankments and water course, will not be affected.
LB15307	Muirmill By Carron Bridge	B	2	Out	The setting of this heritage asset does not extend as far as the Proposed Development. While this heritage asset is identified as having theoretical visibility with the Proposed Development in views to the west, the elements of

					this asset's setting that contribute most to how it is understood, appreciated and experienced as a farmhouse, such as access to agricultural land, will not be affected.
LB50839	Cambusbarron, North Third Water Filter Plant, Former Water Pump House	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.
LB11749	Carron Bridge	B	N/A	Out	No intervisibility with the Proposed Development. The setting of this heritage asset does not extend as far as the Proposed Development.

Table B.3: Assessment Table for Conservation Areas within the Outer Study Areas

No conservation areas have been identified within the Inner Study Area

Designation Reference	Heritage Asset Name	Theoretical number of Turbines Visible	Screened In / Out	Reasoning
CA218	Stirling Town & Royal Park	0 – 4	Out	While the ZTV has identified that there will be theoretical visibility with the Proposed Development from within these conservation areas, this will be limited to glimpsed views between existing buildings and infrastructure forming the conservation areas. The presence of the Proposed Development in the their setting and in views towards it from within the conservation areas will not affect the cultural significance and key elements of the setting which contribute most to its character and appearance.
CA220	King's Park	0 – 4	Out	
CA221	Park Place / Randolphfield	0 – 4	Out	
CA222	Randolph Road	0 – 4	Out	
CA223	St Ninians	2 – 4	Out	
CA224	Torbrex	1 – 4	Out	
CA217	Cambuskenneth	4	Out	

CA202	Bannockburn	0 – 4	Out	
CA638	Drip Bridge	4	Out	
CA637	Bridgehaugh	N/A	Out	
CA210	Gargunnock	N/A	Out	
CA219	Bruce Street	N/A	Out	
CA205	Cambusbarron	N/A	Out	
CA380	Kilsyth	N/A	Out	

Table B.4: Assessment Table for Inventory-listed Garden and Designed Landscapes within the Inner (bold) and Outer Study Areas

Designation Reference	Heritage Asset Name	Theoretical number of Turbines Visible	Screened In / Out	Reasoning
GDL00377	Touch	0 – 3	Out	There is only limited intervisibility with the Proposed Development. The construction and operation of the Proposed Development will not affect the key landscape features, special features or key views to and from this garden and designed landscape.
GDL00400	Cowane's Hospital	4	Out	While the ZTV for the Proposed Development identifies that there will be some theoretic visibility with turbines from within the inventory site boundary this will be limited by existing infrastructure associated with the City of Stirling. The presence of the Proposed Development in the setting of the GDL will not affect the key landscape features, special features or key views to and from it.
GDL00241	King's Knot	0 – 4	Out	While the ZTV for the Proposed Development identifies that there will be some theoretic visibility with turbines from within the inventory site boundary this will be limited by existing infrastructure associated with the City of Stirling. The presence of the Proposed Development in the setting of the GDL will not affect the key landscape features, special features or key views to and from it.

GDL00188	Gargunnock House	N/A	Out	In addition to there being no theoretical visibility from within the garden and designed landscape inventory site boundary, the Proposed Development will not affect the key landscape features, special features or key views to and from this garden and designed landscape.
GDL00410	Colzium Lennox Estate	N/A	Out	In addition to there being no theoretical visibility from within the garden and designed landscape inventory site boundary, the Proposed Development will not affect the key landscape features, special features or key views to and from this garden and designed landscape.

Table B.5: Assessment Table for Inventory-listed Historic Battlefields within the Outer Study Areas

No inventory-listed historic battlefields have been identified within the Inner Study Area

Designation Reference	Heritage Asset Name	Theoretical number of Turbines Visible	Screened In / Out	Reasoning
BTL4	Battle of Bannockburn	0 – 4	Out	While the ZTV for the Proposed Development identifies that there will be some theoretic visibility with turbines from within the inventory site boundary, the Proposed Development will not affect the key landscape characteristics and special qualities of the inventory-listed historic battlefield.
BTL13	Battle of Kilsyth	N/A	Out	In addition to there being no theoretical intervisibility with the Proposed Development from within the inventory battlefield, the construction and operation of the Proposed Development will not affect the key landscape characteristics and special qualities of the inventory-listed historic battlefield.
BTL28	Battle of Stirling Bridge	0 – 4	Out	While the ZTV for the Proposed Development identifies that there will be some theoretic visibility with turbines from within the inventory site boundary, the Proposed Development will not affect the key landscape characteristics and special qualities of the inventory-listed historic battlefield.
BTL38	Battle of	0 – 4	Out	While the ZTV for the Proposed Development identifies that there will be some

	Sauchieburn			theoretic visibility with turbines from within the inventory site boundary, the Proposed Development will not affect the key landscape characteristics and special qualities of the inventory-listed historic battlefield.
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