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standard operating procedures.

Burnhead Wind Farm, Falkirk - EIA:

Cultural Heritage Assessment

9 INTRODUCTION

- 9.1.1 This chapter considers the likely impacts on cultural heritage interests of the construction and operation of the proposed wind farm. The assessment has been undertaken by CFA Archaeology Ltd, informed by comments and information provided by Historic Scotland and the Falkirk Council Archaeologist.
- 9.1.2 The specific objectives of the cultural heritage study were to:
- Identify the cultural heritage baseline within and in the vicinity of the proposed wind farm area.
 - Assess the proposed development site in terms of its archaeological and historic environment potential.
 - Consider the potential and predicted impacts of the construction and operation of the proposed development on the baseline cultural heritage resource, within the context of relevant legislation and planning guidance.
 - Propose measures, where appropriate, to mitigate any predicted significant adverse impacts.
 - Consider the cumulative impacts on cultural heritage resources of the proposed development in combination with other existing or proposed developments.
- 9.1.3 The study area comprises of two distinct parts:
- The proposed wind farm area: comprising the area of land within the application boundary, where direct impacts are likely to occur.
 - The wider landscape: an area around the proposed wind farm area where impacts on the setting of features, including Scheduled Monuments, Listed Buildings, Conservation Areas may occur.
- 9.1.4 **Figure 9.1, Volume 3** shows the proposed wind farm boundary, the proposed wind farm layout, and the locations of archaeological sites and monuments within the proposed development area. **Appendix 9.1 Volume 4** provides a gazetteer of these cultural heritage sites and features, and an indication of the relative sensitivity of each. The layout of the proposed development has been designed to avoid archaeological constraints wherever possible and, as such, contains embedded mitigation.
- 9.1.5 **Figure 9.2, Volume 3** shows the proposed wind farm in its wider landscape setting together with the wind farm's zones of theoretical visibility (ZTV) and the locations of key cultural heritage receptors within 10km of the proposed wind farm that have a theoretical view of the turbines. **Appendix 9.2, Volume 4** contains a list of those key receptors and provides a summary of the predicted indirect visual impacts, on a site by site basis.

- 9.1.6 The predicted direct impacts on cultural heritage sites and features within the proposed development area, arising from construction activities, are identified and appropriate mitigation measures are presented.
- 9.1.7 The assessment of impacts on Gardens and Designed Landscapes is set out in the Landscape and Visual Assessment (**Chapter 6**).

9.2 PLANNING AND LEGISLATIVE BACKGROUND

Context

9.2.8 Scotland's historic environment contributes to the Scottish Government's strategic objectives and to the target of improving the state of Scotland's historic buildings, monuments and environment is identified as a national indicator and target under the National Performance Framework. The Scottish Historic Environment Policy (SHEP) sets out Scottish Ministers' policies for the historic environment, and provides policy direction for Historic Scotland and a framework that informs the day-to-day work of a range of organisations that have a role and interest in managing Scotland's historic environment. Through the implementation of the SHEP, Scottish Ministers wish to achieve three outcomes for Scotland's historic environment:

- 1) That the historic environment is cared for, protected and enhanced for the benefit of our own and future generations.
- 2) To secure greater economic benefits from the historic environment.
- 3) That the people of Scotland and visitors to our country value, understand and enjoy the historic environment.

9.2.9 Cultural heritage resources include sites with statutory and non-statutory designations as set out in Scottish Planning Policy.

9.2.10 Sites with statutory designations include:

- Scheduled Ancient Monuments.
- Listed Buildings.
- Conservation Areas.
- Designated Wrecks.

9.2.11 Sites with non-statutory designations include:

- World Heritage Sites.
- Gardens and Designed Landscapes.

- Historic Battlefields.
- Other Historic Environment Interests.

9.2.12 Scottish Planning Policy requires that planning authorities ensure that development plans provide a framework for the protection, conservation and enhancement of the historic environment to allow the assessment of the impact of proposed development on the historic environment and its setting (para 112). PAN 42 indicates that the principle that should underlie all planning decision-making is preservation of cultural resources in situ, where possible, and by record if destruction cannot be avoided. It is recognised in the PAN that preservation may not always be possible and where damage is unavoidable various mitigation measures may be proposed.

9.2.13 Those relevant to this assessment are Scheduled Monuments, Listed Buildings and other historic environment interests. There are no Conservation Areas nor any Gardens and Designed Landscapes in the area covered by this assessment and these designations are not covered further in the chapter

Sites with Statutory Designations

Scheduled Monuments

9.2.14 Under the Ancient Monuments and Archaeological Areas Act 1979 (1979 Act), the Scottish Ministers are required to compile and maintain a schedule of monuments considered to be of importance. The consent of the Scottish Ministers is required before any works are carried out which would have the effect of demolishing, destroying, damaging, removing, repairing, altering, adding to, flooding or covering up a Scheduled Monument. In addition, impacts of proposed developments upon the setting of a Scheduled Monument can be a material consideration in planning terms. Further information on development control procedures relating to Scheduled Monuments is provided in the SHEP, SPP and in Planning Advice Note (PAN 42): Archaeology.

Listed Buildings

9.2.15 Under the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (1997 Act), the Scottish Ministers are required to compile a list of buildings of special architectural or historic interest. Such buildings are classified into Categories A, B and C(s), in decreasing order of importance. Planning authorities and the Scottish Ministers are required to have special regard for the desirability of preserving Listed Buildings and their settings and any features of special architectural or historic importance they possess. Scottish Government policy and guidance is also provided in SHEP and SPP.

Sites with Non-Statutory Designations

Other Historic Environment Interests

- 9.2.16 There is a range of other non-designated archaeological sites, monuments and areas of historic interest, including battlefields, historic landscapes, other gardens and designed landscapes, woodlands and routes such as drove roads that do not have statutory protection. Sites without statutory protection are curated by the local planning authority and SPP and PAN 42 provides national planning policy guidance and advice on the treatment of such resources.

Regional and Local Planning Policy Guidelines

Falkirk Structure Plan 2007

- 9.2.17 The Structure Plan aims to continue to protect, promote and enhance important aspects of the local built environment whilst seeking to integrate care for the built environment with the economic and social development of the area.
- 9.2.18 Structure Plan Policy ENV5 (Built Environment and Heritage) states that important archaeological sites, Scheduled Monuments, Listed Buildings, Conservation Areas, and sites included in the Inventory of Gardens and Designed Landscape will be protected and enhanced. Local Plans will identify these assets and incorporate policies appropriate to the significance of the area or individual feature, including the following range of measures:
- Measures to ensure that assets are maintained in a good state of repair;
 - Promoting sensitive interpretation of heritage assets;
 - Protection of the assets and their setting from inappropriate development; and
 - Where development would damage, or result in the loss of the asset, that provision is made for adequate recording of the current status of the asset.

Rural Local Plan 1994

- 9.2.19 The Rural Local Plan covers all the countryside of the Falkirk Council area outwith the boundaries of the main settlements and provides a comprehensive statement of planning policy for the countryside.
- 9.2.20 Policy RURAL 15 (Listed Buildings) states that there will be a presumption against proposals which would destroy or adversely affect the architectural character, appearance or setting of Listed Buildings.
- 9.2.21 Policy RURAL 16 (Places of Archaeological Interest) states that there will be a general presumption against development which would destroy or adversely affect Scheduled Monuments and other sites of archaeological / historical importance or their settings. Archaeological sites which are threatened by development, and where preservation has improved impossible, will be excavated and recorded. The District Council supports Historic Scotland's policy to seek developer funding of any necessary excavation, recording and publication works.

- 9.2.22 Policy RURAL 17 (The Antonine Wall) states that there will be a presumption against proposals which would adversely affect the line, setting and amenity of the wall.
- 9.2.23 Policy RURAL 18 (Canals) states that there will be a general presumption against development which will have an adverse effect upon the amenity, setting or nature conservation value of the canals.

9.3 APPROACH TO ASSESSMENT

Data Collection

- 9.3.24 This assessment has been conducted in accordance with the Institute for Archaeologists Code of Conduct (2009) and Standards and Guidance for Archaeological Desk-based Assessment (2008).
- 9.3.25 Up-to-date information was obtained from appropriate sources on the locations of cultural heritage sites with statutory protection and non-statutory designations either within or in the vicinity of the proposed development.
- 9.3.26 Details of the locations and extents of Scheduled Monuments, Listed Buildings, Gardens and Designed Landscapes, in GIS, were downloaded from Historic Scotland's Spatial Warehouse Database¹. Additional information was provided on known archaeological sites and monuments within the proposed development area from the Falkirk Council Sites and Monuments Record (SMR).
- 9.3.27 Information on the character and condition of known archaeological sites and features within the proposed development area was obtained from the National Monuments Record of Scotland (NMRS) via the online Pastmap resource², maintained by the Royal Commission on the Ancient and Historic Monuments of Scotland and Historic Scotland (RCAHMS).
- 9.3.28 Ordnance Survey maps and other early maps held by the Map Library of the National Library of Scotland were examined, to provide information on sites of potential archaeological significance and historic land-use development.
- 9.3.29 An assessment was made of vertical aerial photograph collections held by the RCAHMS. Sorties dating from 1947 - 1988 were available for examination.
- 9.3.30 Bibliographic references were consulted to provide background and historical information.
- 9.3.31 The online Historic Land-Use Assessment for Scotland³, maintained by the RCAHMS was consulted for information on the historic land use character of the proposed development area.

¹ Historic Scotland's Spatial Warehouse Database: <http://hsewsf.sedsh.gov.uk/gisd.html>.

² Pastmap website: <http://jura.rcahms.gov.uk/PASTMAP/start.jsp>

³ Historic Land-Use Assessment for Scotland website: <http://www.rcahms.gov.uk>

9.3.32 The Scottish Palaeoenvironmental Database (SPAD⁴) which records the distribution of known palaeoenvironmental sites across Scotland was consulted for information on data within or adjacent to the wind farm area.

Field survey

9.3.33 A reconnaissance field survey (equating to a RCAHMS Level 1⁵ survey) was undertaken of the proposed development site on 6th July 2010. The aims of the field survey were to:

- assess the baseline condition of the known archaeology and heritage features, previously identified through the desk-based assessment,
- identify any further features of cultural heritage interest not detected from the desk-based assessment and identify area with the potential to contain currently unrecorded, buried archaeological remains;
- identify areas with the potential to contain unrecorded, buried archaeological remains, taking into account factors such as topography, geomorphology and ground conditions;
- assess the potential impacts of the construction of the proposed wind farm on cultural heritage sites and areas, and their settings, where appropriate.

9.3.34 Identified sites were recorded on pre-forma monument recording forms and by digital photography and their positions (and where appropriate their extents) were logged using GPS equipment. These archive materials will be offered to the Falkirk Council Sites and Monuments Record (SMR). No intrusive archaeological interventions have been carried out as part of this assessment.

9.3.35 No detailed survey was undertaken within the afforested areas owing to the dense, impenetrable nature of the plantation woodland. However, sites identified by the desk-based assessment within the forest were visited where access was possible.

9.3.36 A site visit to key cultural heritage assets was undertaken on 9th July 2010 to assess the character and sensitivity of the setting of the identified receptors, and to assess the effects of the proposed development on those settings. The site visit focused on cultural heritage sites most likely to receive significant effects on their settings (i.e. those closest to the development area) and those specifically identified as requiring assessment by Historic Scotland. Where access was difficult or denied, publicly accessible locations as close as possible to the receptor were sought as a basis for assessment. This applies principally to private house and gardens, and sites and monuments on private land. Factors considered to aid the assessment were:

- the location and orientation of the site;

⁴ SPAD website: <http://xweb.geos.ed.ac.uk/~ajn/spad>

⁵ Royal Commission on the Ancient and Historical Monuments of Scotland Corporate Plan 2004-9, Survey and Recording Policy, p12. www.rcahms.gov.uk/survey

- important views of or from principal facades;
- the importance, if applicable, of designed settings; and
- any obvious views or vistas.

9.3.37 The outcome of this work was an understanding, involving the application of professional judgement, of the key characteristics that define the setting of each receptor.

Turbine Delivery Route to the Wind Farm

9.3.38 No desk-based assessment or field survey was undertaken for the route of the turbine delivery track through the forestry land north of the site, shown on **Figure 9.1, Volume 3**. It is expected that the existing timber extraction route will be suitable for turbine delivery and no additional works are proposed.

9.4 IMPACT ASSESSMENT METHODOLOGY

9.4.39 The effects of the proposed development on cultural heritage assets were assessed on the basis of their type (direct, secondary, indirect, cumulative), nature (beneficial, neutral or adverse), and longevity (reversible, short-term or long-term, irreversible, permanent). The assessment took into account the sensitivity of the receptor and the magnitude of impact. Mitigation measures designed to prevent, reduce or offset significant adverse effects are proposed, and residual effects are assessed taking into account the likely effectiveness of the mitigation proposed. The reporting of assessment of effects contains a statement as to any limitations on the confidence placed on the assessments, providing reasons as necessary.

9.4.40 The assessment of sensitivity of archaeological and heritage assets reflects the relative weight which statute and policy attached to them, principally as published in Scottish Planning Policy (SPP) and Scottish Historic Environment Policy (July 2009). Table 9.1 summarises the relative sensitivity of key cultural heritage resources.

Table 9.1: Sensitivity of Cultural Heritage Assets

Sensitivity	Definition / Criteria
High	Sites of national or international importance, including World Heritage Sites Scheduled Monuments, and sites proposed for scheduling Undesignated archaeological sites and areas of likely national importance identified in HERs/SMRs
Medium	Sites of regional importance, including: Archaeological sites and areas of distinctive regional importance Archaeologically Sensitive Areas Category B listed buildings Conservation Areas

Low	Sites of local importance, including: Archaeological sites of local importance Category C(S) listed buildings Unlisted historic buildings and townscapes with local (vernacular) characteristics
Negligible	Sites of little or no importance, including: Sites of former archaeological features Unlisted buildings of minor historic or architectural interest Poorly preserved examples of particular types of feature

Assessment of Physical Impacts

9.4.41 Criteria for assessing the magnitude of direct physical impacts, which measures the degree of change to the baseline condition of a feature that would result from the construction of one or more elements of the proposed development, are presented in Table 9.2.

Table 9.2: Definitions of Magnitude of Impacts

Level of magnitude	Definition
High	A fundamental change to the baseline condition of the receptor, leading to total or major alteration of character.
Medium	A material, partial alteration of character.
Low	Slight, detectable alteration of the baseline condition of the receptor.
Imperceptible	A barely distinguishable change from baseline conditions.

9.4.42 Sensitivity of the receptor and magnitude of impact are used to inform the professional judgment of the likely significance of the physical effect. Table 9.3 summarises the criteria for assigning significance of a physical effect. Major and moderate effects are considered to be significant in terms of the EIA Regulations. Where a physical effect on a feature is likely, the assessment contains a summary statement of the 'cultural significance' of that feature (following the guidance defined in Annex 1 of Scottish Historic Environment Policy (July 2009)).

Table 9.3 Matrix for Assessing Significance of Impacts.

Magnitude ▼				
High	Minor	Moderate	Major	Major
Medium	Negligible	Minor	Moderate	Major
Low	Negligible	Negligible	Minor	Moderate
Imperceptible	Negligible	Negligible	Negligible	Minor
	Negligible	Low	Medium	High
	Sensitivity ►			

Identification of External Receptors and Characterisation of their Settings

9.4.43 Details were obtained for previously recorded cultural heritage sites, monuments and landscape features with statutory and non-statutory designations,

undesigned archaeological sites of likely national importance, within the landscape surrounding the proposed development site. A Zone of Theoretical Visibility (ZTV) map, generated for the proposed development, was used to identify those cultural heritage receptors within 10km of the proposed development boundary from where there is theoretical intervisibility with one or more wind turbines.

9.4.44 Guidance issued by Historic Scotland notes that the setting of a receptor could be affected by the introduction of new development into its surroundings, even if that new development will not be directly visible from the receptor. Such cases may arise, for example, when both development and a highly sensitive receptor will be caught in important views, vistas or prospects from somewhere other than the receptor's location. Further appraisal of the dataset will be undertaken to establish if there are any such instances whereby potential effects on setting will be assessed.

9.4.45 The baseline setting of each relevant receptor or related group of receptors will be characterised on a case-by-case basis. Characterisation of setting of a receptor will be based upon its properties and location, and will take into account the factors identified in the guidance issued by Historic Scotland. The baseline setting of each receptor will be characterised principally in terms of the:

- Archaeological / historical context of the receptor;
- Current landscape and visual surroundings of the receptor;
- Aesthetic and experiential properties of the receptor within its surrounding;
- Social value (actual or potential) of the receptor as a recreational / leisure or education resource.

9.4.46 Where it is established that the setting of a receptor is such that there is no potential for it to be affected by the presence of the development, the receptor was not considered further in the assessment. For example where the setting of a receptor is localised and does not include the development site or, as noted in Historic Scotland's published guidance, the setting of a cultural heritage asset may not include all land visible from that asset, since distant views alone are not necessarily sufficient to raise concerns about adverse effects on setting.

Assessment of Impacts on Setting

9.4.47 For each receptor where a potential effect on setting has been identified, the assessment of possible effects adopts a four-stage approach:

- identification of the characteristics of the setting of the receptor (see above);
- assessment of the sensitivity of that setting;
- identification of how the presence of the proposed development will affect that setting (magnitude of impact); and

- assessment of significance of effect.

Criteria for Assessing Sensitivity of Setting

9.4.48 Sensitivity of setting was assessed by considering two factors:

- the relative weight which statute and policy attach to the receptor and its setting; and
- the degree to which the baseline setting contributes to the understanding and/or appreciation, and hence value, of the receptor.

9.4.49 The relative weight that statute and policy attach to the receptor and its setting is determined using the sensitivity of archaeological and heritage resources set out in Table 9.1. Where individual designated receptors are present within larger designated areas (e.g. Listed Buildings within a Conservation Area; Scheduled Monuments within an Archaeologically Sensitive Area), the sensitivity is stated as the higher of the two designations. None of the sites included in the assessment is of 'negligible sensitivity'.

9.4.50 The degree to which the baseline setting contributes to the understanding and/or appreciation of the receptor will be assessed according to the criteria set out in Table 9.4.

Table 9.4: Contribution of Setting to Understanding and the Appreciation of a Cultural Heritage Receptor

Contribution	Definition
High	A setting which makes a strong positive contribution to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of a receptor. (e.g. a prominent topographic location; surroundings that include related monuments in close association; surroundings that are believed to be little changed from those when the receptor was created.)
Medium	A setting which makes some positive contribution to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of a receptor. (e.g. surroundings that complement the siting and appearance of a receptor, such as the presence of a feature of the rural past within a more recent farming landscape containing little or no urban or industrial development.)
Low	A setting which makes little positive contribution to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of a receptor. (e.g. where surroundings only partially complement the siting and appearance of a receptor, such as the presence of a feature of the rural past within a partly urbanised or industrialised landscape.)
Negligible	A setting which does not contribute positively to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of a receptor.

	(e.g. immediate surroundings of a commercial coniferous single species woodland or an industrial development that are not relevant to understanding the context of the receptor).
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9.4.51 These two criteria, the relative weight that statute and policy attach to each receptor and its setting and the degree to which the baseline setting contributes to its understanding and / or appreciation (described above), were combined to assess the overall sensitivity of a setting, as set out in Table 9.5.

9.4.52

Table 9.5 Sensitivity of Setting of a Receptor

Sensitivity of Receptor ▼	Contribution of Setting ►			
	High	Moderate	Low	Negligible
High	High	High	Medium	Low
Medium	High	Medium	Low	Low
Low	Medium	Low	Low	Low

9.4.53 Table 9.5 defines the overall contribution of setting. The characterisation of baseline setting for each receptor identified any specific elements of that setting which individually provide a greater contribution to understanding and/or appreciation of a receptor than the overall assessment might suggest.

Identification of Magnitude of Impact on Setting

9.4.54 Magnitude of impact on setting will be assessed according to the thresholds in Table 9.6.

Table 9.6 Magnitude of Impacts on Setting

Level of Magnitude	Definition
High	Fundamental impacts obviously changing the surroundings of a receptor, such that its baseline setting is substantially or totally altered.
Medium	Impacts discernibly changing the surroundings of a receptor, such that its baseline setting is partly altered.
Low	Slight, but detectable impacts that do not alter the baseline setting of the receptor materially.
Imperceptible	A very slight and barely distinguishable change from baseline conditions.

Assessment of Impact Significance

9.4.55 The significance of effect on setting depends on both the magnitude of impact and the sensitivity of the setting of the receptor. Table 9.7 presents the matrix that was used to inform the determination of the significance of effects on setting.

Table 9.7 Magnitude of Impacts on Setting

Magnitude ▼	Sensitivity ►		
	High	Medium	Low
High	Major	Major	Minor
Medium	Major	Moderate	Minor

Low	Minor ⁶	Minor	Negligible
Imperceptible	Negligible	Negligible	Negligible

Significance Criteria

9.4.56 The proposed criteria for determining the significance of cultural heritage effects are provided in Table 9.8. Effects considered to be of major or moderate significance are deemed to be significant in terms of the EIA Regulations.

Table 9.8 Significance Criteria

Significance of Impact	Definition
Major	A change to the fabric or setting that leads to a substantial effect on the character, quality or context of a receptor.
Moderate	Changes to the fabric or setting that lead to a material effect on the character, quality or context of a receptor.
Minor	Changes to the fabric or setting that lead to a detectable but non-material change effect on the character, quality or context of a receptor.
Negligible	Changes to the fabric or setting that lead to, at most, a negligible effect on the character, quality or context of a receptor.

9.5 BASELINE CONDITIONS

General

9.5.57 This section considers the known cultural heritage resource, both within and in the vicinity of the wind farm area. Numbers in parentheses in the following sections refer to site numbers annotated on Figures 9.1 and 9.2, and detailed in Appendices 9.1 and 9.2.

9.5.58 Thirteen sites of cultural heritage interest have been identified within the proposed wind farm area (**Figure 9.1, Volume 3**). **Appendix 9.1, Volume 4** provides tabulated gazetteer information on the character, baseline condition and cultural heritage importance of each site. This information is discussed thematically below.

9.5.59 Twenty-eight Scheduled Monuments, one of which is also a Category A Listed Building, and fifty-three Listed Buildings (**Figure 9.2, Volume 3**) within 10km of the proposed wind farm are predicted to have views of the wind turbines based on the ZTV model. **Appendix 9.2, Volume 4** provides tabulated gazetteer information on the character, baseline setting and sensitivity of each site. There are no Conservation Areas within 10km from which there would be views of the proposed wind farm.

⁶ A non-material change to baseline conditions cannot by its nature lead to a significant impact. A significant impact arises from a material change to baseline conditions. This distinction explains why this particular significance assessment findings is not 'moderate'.

Consultation

- 9.5.60 A pre-application letter (16.04.2008) was sent by Wind Prospect Developments Ltd to Historic Scotland inviting comment of the proposed wind farm. A reply was received from Historic Scotland on 24.04.2008. Details are provided below in table 9.9.
- 9.5.61 A scoping report (May 2010) was sent by Wind Prospect to Historic Scotland and Falkirk Council inviting comment on the proposed wind farm. A reply was received from Historic Scotland on 03.06.10 and from Falkirk Council on the 13.08.2010. Details are provided below in Table 9.9.
- 9.5.62 Consultation letters requesting information on cultural heritage resources relevant to the assessment of the proposed wind farm were sent by CFA Archaeology Ltd to Historic Scotland (01.06.2010) and the Falkirk Council Archaeologist (02.06.2010). A reply was received from the Falkirk Council Archaeologist on 03.06.2010 and from Historic Scotland on 05.07.2010. Details are provided below in Table 9.9.
- 9.5.63 CFA Archaeology sent a consultation email (21.10.2010) to the Falkirk Council Archaeologist requesting agreement on the mitigation requirements / strategy for the proposed wind farm. A telephone conversation between CFA Archaeology and the Falkirk Council Archaeologist took place on the 22.10.2010 to discuss the mitigation strategy and a reply by email was received from the Falkirk Council Archaeologist on 25.10.2010. Details are provided below in Table 9.9.

Table 9.9 Significance Criteria

Consultee	Scoping Opinion / Other	Issues Raised
Historic Scotland	Pre-application Response (24.04.2008)	Confirmed that there are no Scheduled Monuments; Listed Buildings; and, Gardens and Designed Landscapes within the site boundary. Requested that historic environment issues should be taken into consideration as part of the site selection process. Desk assessment of existing historic environment records and other sources of information should be used to gather baseline information. A non-invasive walkover survey and field evaluation should be undertaken to augment this information and assess the area's potential for the discovery of yet undiscovered archaeological sites. Requested that assessment of indirect visual impacts on the setting of key external receptors be supported by appropriate visualisations such as wireframes or photomontages.
Historic Scotland	Scoping Opinion (03.06.2010)	Welcomed the approach of the assessment as laid out in the Scoping Report (May 2010) and also confirmed the accuracy of the list of sites presented and asked that an assessment is provided of these sites.
Falkirk Council Archaeologist	Reply to consultation from CFA (03.06.2010)	Provided information on cultural heritage sites, within the proposed development site, recorded in the Falkirk Councils Sites and Monuments

		Record (SMR). Noted that they knew of no local heritage groups that have an interest in the proposed development site or surrounding area. Provided no further comment on the proposed wind farm.
Falkirk Council	Scoping Opinion (13.08.2010)	Provided the contact details for the Falkirk Council Archaeologist as a source of local information. Provided no specific comments on cultural heritage issues.
Falkirk Council Archaeologist	Telephone Conversation between CFA and Council Archaeologist 22.10.2010	Falkirk Council Archaeologist agreed that no mitigation would be required for the predicted non-significant direct impacts on three archaeological sites (4, 11c, 13) within the proposed wind farm area.
Falkirk Council Archaeologist	Reply to consultation from CFA regarding mitigation strategy (25.10.2010)	Acknowledged that, due to the dearth of sites and finds from the immediate area, within the proposed wind farm and the surrounding landscape, there would be no requirement for evaluation work as part of the wind farm development. Requested that a watching brief be carried out on the wind turbine bases and hardstandings in line with the Falkirk Council policy of sampling the stratigraphy on sites with no known archaeology.

Desk-based Assessment Results

- 9.5.64 There are no Scheduled Monuments or Listed Buildings within the proposed wind farm planning application site area, and no part of the proposed wind farm lies within a Conservation Area or Historic Garden and Designed Landscape.
- 9.5.65 The NMRS and SMR contains records for one site; Wester Burnhead Farmstead (1). In addition, the SMR holds a record pertaining to one lint pool (7).
- 9.5.66 Examination of historical maps led to the identification of ten additional sites and features; two farmsteads at East Burnhead (5) and Fencihillhead (9); three wells (2, 3, 6), a track (4), two lint pools (8, 10), an old mine (11), and a former coal pit (12).
- 9.5.67 Vertical aerial photographs held by the RCHAMS provided additional information on the baseline character of sites identified by the NMRS; SMR and historical maps. Substantial areas of former rig and furrow cultivation (13) are also visible on aerial photographs.
- 9.5.68 The Scottish Palaeoenvironmental Database (SPAD) resulted in the identification of a record of a former lowland raised mire at Easter Whin (Lindsay and Immirizi 1996) centred on NS 875 692 which covers the southwestern end of the proposed development site.
- 9.5.69 The Historic Landscape Assessment map indicates that the development principally consists of 18-19th century rectilinear fields which enclose areas of

improved pasture principally surrounding the farmstead at Easter Burnhead. The northwest half of the proposed development site has been planted with conifer plantation, and disused former 20th century quarry works are present just south of 'Greenhill', within the northern corner of the site. A small area of unmodified moorland is also present to the southwest corner of the proposed development site.

- 9.5.70 Field survey established the baseline conditions of most of those sites identified by the desk-based assessment within the proposed wind farm. No additional cultural heritage sites or features were identified during the field survey.

Character of cultural heritage

- 9.5.71 The majority of the sites and features within the proposed development site are associated with medieval or later settlement and agrarian activity. Detailed descriptions are provided in **Appendix 9.1, Volume 4** and the sites are discussed thematically below.

Medieval and Later Remains

Farmsteads

- 9.5.72 A 'township' or 'fermtoun', annotated as Burnhead is first depicted on Pont's map (1583-1601) just north of an unnamed burn. The same 'fermtoun' is shown on subsequent maps up until 1817 when Grassom's map shows two 'fermtouns' annotated as 'Wester' (1) and 'Easter' (5) Burnhead. The modern Ordnance Survey maps shown many groups of farms possessing a common name but distinguished by different prefixes, such as Easter, Wester, Over, and Nether. Documentary evidence indicates that these farms originated as a single township (fermtoun) but split during the pre-improvement period as a result of patterns of land ownership (subletting of land; division through inheritance), or because of population growth where the fermtoun had become too large and complex to manage (Glendinning & Wade Martin 2008). The split townships were then amalgamated to single farms during the improvement period (Whyte & Whyte 1991). Map evidence (Forrest 1818) indicates that by the early 18th century Mr Carrick Esq owned the farm at Easter Burnhead, while a Mr Rankine, possible a tenant of Mr Carrick's, was settled at Wester Burnhead. Both farms are depicted on the Ordnance Survey 1st Edition map (1865) (Figure 2. Ordnance Survey Extracts) but by the late 19th century the farm at Wester Burnhead was out of use (Ordnance Survey 2nd Edition 1899). Evidence from later Ordnance Survey maps (1922-1967) indicates that the farm at Easter Burnhead (5) was occupied up until the mid-1960s when it was abandoned and modified for sheep management use.
- 9.5.73 Today both farms survive as ruins. The well-preserved remains of a rectangular steading are present at Easter Burnhead (5). The steading comprises of a 2-storey farmhouse with rectangular barns running from either end of the farmhouse, and the structures survive in most places to roof height. The symmetrical order of the steading would have been constructed during the Improvement Period and probably dates to the early 19th century. Although an old roof line, visible on the

northeast elevation of the farmhouse indicates that an earlier 1-storey building was incorporated into the Improvement Period steading. The farmstead ruins are considered to be of low sensitivity and local historical environment interest.



Plate 1. Ruins of Easter Burnhead Farmstead (5)

- 9.5.74 The remains of the farmstead at Wester Burnhead (1) are very poorly preserved. The L-shaped steading is only visible as a series of low-relief walls in an area of improved pasture. Much of the remains have been disturbed probably by animal trampling. The outline of an enclosure depicted to the southwest of the farmstead on the Ordnance Survey 1st Edition map (1865) is visible as a relict beech hedge surrounding an area of improved ground. The farmstead is considered to be of low sensitivity and local historical environment interest.



Plate 1. Remains of Wester Burnhead Farmstead (1)

- 9.5.75 A third 'fermtoun' (9), annotated as 'Fencihillhead' is depicted on Roy's map (1747-55) and subsequent maps. The farmstead is not shown on the 1997 Ordnance Survey map and it appears that the building has been demolished as part of 20th century quarry works in this area. The farmstead is of negligible sensitivity and lesser historical environment interest.

Rig and Furrow Cultivation

- 9.5.76 Several areas of rig and furrow cultivation defining small unenclosed fields, surrounding the farmsteads at Wester (1) and Easter (5) Burnhead, are visible on aerial photographs dating to 1947. The areas of rig and furrow correspond with areas of improved land shown on the Ordnance Survey 1st Edition map (1865). Only the faint outline of rig and furrow remains (highlighted in brown on **Figure 9.1, Volume 3**) were visible in an improved pasture field just north of Easter Burnhead (5). The straight narrow rig is most likely to be of post-medieval date and is considered to be of low sensitivity and local historical environment interest.

19th century Mining

- 9.5.77 The location of a former coal pit (12) is shown on the Ordnance Survey 2nd Edition map (1899) within what is now an area of commercial forestry plantation. The coal pit is also depicted as a small mound within the clearing of the forestry on the Ordnance Survey 2001 map, although no longer annotated. The pit is considered to be of negligible sensitivity and lesser historical environment interest.

9.5.78 The 1957 Ordnance Survey map shows an 'Old Mine' (11) approximately 300m north of the ruins of Wester Burnhead (5). The mine is not shown on earlier maps suggesting that it was opened sometime after 1922. The mine area (11a) now lies within an area of conifer plantation and could not be reached during the field survey, the current baseline condition of the site is therefore unknown. The remains of a track (11c) leading to the mine, still survives within a forestry ride, and the ruins of a brick built building (11b), probably associated with the mine workings, survives immediately west of the track. The mine workings are all considered to be of negligible sensitivity and lesser historical environment interest.

Miscellaneous Features

9.5.79 Three wells (2, 3, 6) are shown on the Ordnance Survey 1st Edition map (1865) associated with the farmsteads at Wester and Easter Burnhead (1, 5). No trace of the wells were found during the field survey, although a spring was present just south of Easter Burnhead (5), at the location of well (6), and this may have been used as a source of water by the farmstead inhabitants. The wells are all considered to be of negligible sensitivity and lesser historical environment interest.

9.5.80 A track (4) is depicted running between Wester (1) and Easter Burnhead (5) on Forrest's map (1818) and later maps. Today a farm access track runs along a similar route to that shown on the Ordnance Survey 1st Edition map (1865) and there is no evidence to suggest that the original track was anything other than a rough cart track. The track is considered to be of negligible sensitivity and lesser historical environment interest.

9.5.81 Two 'lint pools' (flax retting pools) (7, 8) are depicted on the Ordnance Survey 1st Edition map (1865) and a further possible 'lint pool' (10) is shown on the Ordnance Survey 2nd Edition map (1899). Once harvested flax has to be soaked (retted) and then dried before being processed into linen. Lint pools or flax retting pools were used for steeping the flax plants in stagnant water to separate the plant fibres. The Statistical Accounts of 1791-99 record that the soils in the Slamannan area were good for flax growth and for a long period, particularly during the Continental War (1793-1815), the area was famous for its culture of flax. However, flax production diminished during the 19th century when cotton production became much cheaper rendering the cultivation of flax unprofitable. No trace of the lint pools (7, 8, 10) were found and they are considered of negligible sensitivity and lesser historical environment importance.

Assessment of the Archaeological Potential of the Proposed Wind farm Area

9.5.82 The proposed development site is situated within an area of upland pasture land that lies between several industrial towns, including Falkirk, Bathgate and Airdrie on the southwestern edge of Falkirk Council. The site lies between 190 and 210 AOD. The northern corner of the proposed development site has been completely sterilised by 20th century quarry works (extent of quarry works shown on **Figure 9.1, Volume 3**). The quarry works are no longer in use although the area has not been reinstated and extraction areas and associated spoil heaps are still visible.

- 9.5.83 Today the northwestern edge of the proposed development site now forms part of Wester Burnhead Wood spruce forestry plantation. Only the southern half of the proposed development site, which is used for grazing, appears to have remained relatively unchanged since the 19th century. The ruins of two farmsteads (1, 5), that probably have origins in the medieval period, survive in this pasture area just north of Drumtassie Burn.
- 9.5.84 The NMRS and SMR contain few records pertaining to the area immediately around the proposed development site. Several farmsteads of 18th century or earlier date, including Drumduff (NMRS no NS86NE 18); Drumelzie (SMR no: 18770); Blackmuir (NMRS no: NS86NE 25), and Lochstank (NMRS no: NS86NE 17) are recorded within 500m of the proposed development site boundary. No prehistoric finds have been found close to the site.
- 9.5.85 An archaeological watching brief carried out along the Bathgate to Newarthill Pipeline route, which runs past the southern edge of the proposed development site, recorded small areas of medieval / post-medieval rig and furrow cultivation and occasional post-medieval drains. No further finds were recovered (Kennedy & Somerville 2003).
- 9.5.86 The number, distribution and condition of sites identified within the proposed development area and the available evidence of historic and current land-use of the area suggests that the potential for, as yet undetected, buried remains of medieval or earlier archaeological sites surviving within the proposed development area is low. Taking into consideration the limited land-take required by the separate elements of the proposed wind farm the probability of encountering hitherto undiscovered sites of archaeological significance during the course of the construction work is considered to be negligible. It is judged that there is no potential for any archaeological remains to survive in the area of former quarrying.

Key Receptors within 10km of the Proposed Wind Farm

- 9.5.87 Those Scheduled Monuments and Listed Buildings within 10km (**Figure 9.2, Volume 3**) and which would have views of the wind farm vary greatly in character and date, from prehistoric settlement, ritual and funerary sites (including standing stones, chambered cairns and forts) to 19th century farmsteads and former mining/colliery remains. Amongst the listed buildings there is a Preceptory, canals, several bridges, several kirk/churches and associated kirkyards, country houses, and a railway viaduct. The majority of sites are present to the east of the proposed wind farm located in built up areas of Bathgate, Torphichen and the outskirts of Falkirk.
- 9.5.88 Twenty-eight Scheduled Monuments, six Category A Listed Buildings, twenty-six Category B Listed Buildings, and twenty-two Category C(S) Buildings within 15km of the proposed development site are predicted to have views of the proposed wind turbines based on the ZTV model. The ZTV is produced from land form topography data and does not incorporate trees or manmade features that can screen views or affect settings. There are no Gardens or Designed Landscapes or

Conservation Areas within 15km to have predicted views of the proposed wind turbines. Those sites predicted as being intervisible with the proposed wind farm are shown on **Figure 9.2, Volume 3** and details are provided in **Appendix 9.2 Volume 4**.

9.6 IMPACTS AND MITIGATION

Construction impacts

- 9.6.89 The assessment of predicted impacts has been carried out with reference to the wind farm layout shown on **Figure 9.1, Volume 3** which embeds mitigation into the siting of the turbines, to avoid archaeological constraints wherever possible.
- 9.6.90 Any ground-breaking activities associated with the construction of the proposed wind farm (such as may be required for turbines bases and crane stances, access tracks, cable routes, compounds, etc) have the potential to disturb or destroy features of cultural heritage interest. Other construction activities, such as vehicle movements, soil and overburden storage and landscaping also have the potential to cause direct impacts on the cultural heritage.
- 9.6.91 Using the criteria detailed in Section 9.4, **Appendix 9.1 Volume 4** provides a final column which summarises the predicted impacts on the identified cultural heritage sites and features identified by the study within the proposed development area. These impacts are discussed in more detail below.

Direct Impacts

- 9.6.92 A direct impact is predicted for a track (4), farm access track, which would be crossed in several places by the proposed new access tracks for the proposed windfarm. The track depicted on the 1865 Ordnance Survey 1st Edition map and is currently used as a field access track providing access to the west of the site from Heights Road. The predicted impact on the track is considered to be of imperceptible magnitude and of negligible significance.
- 9.6.93 A direct impact is predicted for a disused access track (11c) leading to a former mine (11a). The track would be crossed by the proposed new access track running between T1 and T2. The track is depicted on the 1957 Ordnance Survey map and currently partially used as a field access track. The predicted impact on the track is considered to be of imperceptible magnitude and of negligible significance.
- 9.6.94 Direct impacts are predicted for an area of relict rig and furrow cultivation (13) that survives just north of Burnhead Farm Ruins. Two sections of proposed new access track, running between T3 & 4, and T4 & 5 would cut across the relict rig and furrow remains, and T5 itself would be positioned towards the centre of the rig and furrow remains. Construction of the new tracks and ground disturbing works for the turbine lay down area and base would disrupt the rig and furrow remains. The

predicted impact on the rig and furrow remains is judged to be of medium magnitude, and of minor significance.

- 9.6.95 No other direct impacts are predicted on cultural heritage sites and monuments within the proposed wind farm area.

Uncertain Impacts

- 9.6.96 In addition to the site specific predictions, stated above, ground disturbing excavations associated with the construction of the proposed development could have an adverse impact on any unrecorded, buried archaeological remains present in affected areas. Taking into account the limited extent of the proposed ground disturbance generated by the construction of access tracks, cable routes, turbine bases, hard standing areas, construction compounds and substation, the likelihood of encountering remains of archaeological significance is considered to be negligible. It is considered that there is no potential for archaeological remains to survive in areas of former quarrying.

Mitigation

- 9.6.97 Through consultation with the Falkirk Council Archaeologist an appropriate strategy for archaeological mitigation works was agreed:

- No mitigation would be required to offset the predicted direct impacts on three sites: trackways (4, 11c) and rig and furrow remains (13).
- A watching brief(s) would be required during ground breaking works for the hardstandings and bases of the proposed wind turbines. Where turbines would be constructed on land that has previously been disturbed by 20th century quarry works (highlighted in blue on **Figure 9.1, Volume 3**) no watching brief would be required.
- No further mitigation works would be required.

- 9.6.98 If significant discoveries were made during archaeological monitoring, and preservation in situ of any sites or features was not possible, provision would be made for the excavation, where necessary, of any archaeological remains. This provision would include the consequent production of written reports on the findings, with post-excavation analyses and publication of the results of the work, where appropriate.

Construction guidelines

- 9.6.99 Written guidelines would be issued for use by all construction contractors, outlining the need to avoid causing unnecessary damage to unknown archaeological sites. Those guidelines would contain arrangements for calling upon retained professional archaeological support in the event that buried archaeological remains of potential archaeological interest were discovered in areas not subject to

archaeological monitoring. The guidance would make clear the legal responsibilities placed upon those who disturb artefacts or human remains.

Operational impacts

- 9.6.100 The presence of development features may have indirect visual impacts on the setting of cultural heritage sites both within the proposed wind farm and in the wider landscape. Wind turbines and, to a lesser extent, anemometer masts have the potential to cause indirect visual impacts over a wide area. In particular, there is potential for the wind farm to be present in views of and from Scheduled Monuments, Listed Buildings and other cultural heritage sites and areas in the vicinity of the proposed wind farm.
- 9.6.101 A list of external receptors within 10km of the proposed wind farm and predicted by the ZTV to have views of one or more turbines is provided in **Appendix 9.2 Volume 4**. This also provides a summary assessment of the predicted impacts on a site-by-site basis, using the criteria detailed in Section 9.4 and Tables 9.4 - 9.8. The assessment of magnitude of impacts provided in **Appendix 9.2 Volume 4** has been based on analysis of the blade tip ZTV, taking into account the distance of the assessed site from the proposed wind farm and the number of turbine blade tips visible. The ZTV is, however, a course predictive tool based on bare-earth surface topography and maximum blade-tip heights. It takes no account of obstructions to intervisibility caused by existing forestry and other vegetation or buildings and other man-made features. Scheduled Monuments, Category A, B and C(S) Listed Buildings within 10km of the proposed wind farm area have been assessed.
- 9.6.102 Gardens and Designed Landscapes are dealt within in Chapter 6: Landscape and Visual Assessment.
- 9.6.103 Sites predicted to receive potentially significant adverse effects or identified by Historic Scotland as ones they required to be considered by the EIA have been discussed in detail below.
- 9.6.104 Historic Scotland did not have any specific concerns regarding the impact of the proposed wind farm on the setting of cultural heritage receptors within the wider landscape. It is considered that the proposed wind farm will not have any significant positive or adverse impacts on any key cultural heritage receptors identified by the study (see **Appendix 9.2 Volume 4** for a summary assessment on a site by site basis).

9.7 CUMULATIVE IMPACT ASSESSMENT

- 9.7.105 Cumulative impacts on the cultural heritage resource result from changes to the current baseline setting of the resource caused by the proposed development in conjunction with other developments that occurred in the past, present or are likely to occur in the foreseeable future (see The Landscape Institute 2002, 85).

9.7.106 Within 10km of the proposed Burnhead wind farm there is one operational wind farm at Greendykes, which comprises of two wind turbines; one wind farm at Grenngairs in the planning stage; and one wind farm at Callander at the scoping stage (**Figure 6.10, volume 3**). These wind farms would be present to the west and northwest of the proposed Burnhead wind farm. The closest, the operational wind farm at Greendykes, would lie approximately 2.5km to the west of the proposed Burnhead wind farm. It is judged that the addition of the wind farm at Burnhead to a landscape containing these wind farms would not significantly alter the baseline setting of cultural heritage resources identified within this study and would therefore not alter the likely significance of effects already identified earlier in this chapter of the Environmental Statement.

9.8 STATEMENT OF SIGNIFICANCE

9.8.107 Thirteen sites of cultural heritage interest have been identified by the assessment within the proposed wind farm area, using a range of desk-based sources, consultations and a field study (**Figure 9.1, Volume 3**). The majority of the sites and features recorded are associated with medieval or later rural settlement and agrarian activity and are judged to be of no more than low sensitivity and of local historic environment interest.

9.8.108 An assessment of the known cultural heritage resource of the surrounding area indicates that there is a low probability of encountering sites or features of archaeological interest within the proposed wind farm area. However, given the limited extent of the separate elements of the proposed wind farm it is judged that the probability of encountering sites or features of archaeological interest is negligible; while it is considered that there is no potential for archaeological remains to survive in areas of former quarrying.

9.8.109 Direct impacts have been predicted on two tracks (4, 11c) and an area of relict rig and furrow cultivation (5). These are considered to be of negligible sensitivity and lesser historic environment interest and the impacts on these sites are of no more than negligible significance

9.8.110 Twenty eight Scheduled Monuments, one of which is also a Category A Listed Building, and fifty-three Listed Buildings have been identified within 10km from which there are predicted views of the wind farm. In no case would the settings of these receptors be likely to be affected significantly by the construction and operation of the proposed development.

9.8.111 A mitigation strategy was agreed with the Falkirk Council Archaeologist. No mitigation would be required to off-set the predicted direct impacts. A watching brief would be required on ground breaking works for the hardstandings and bases of the proposed wind turbines.

9.9 REFERENCES

Historical Maps

- Ainslie J (1820) *Map of the Southern Part of Scotland*
- Thomson J (1820) *Stirlingshire*
- Thomson J (1820) *Linlithgow*
- Grassom J (1817) *Stirling*
- Moll H (1747) *The Shires of Stirling and Clackmannan*
- Blaeu J (1654) *Atlas of Scotland, Sterlinensis praefectura [vulgo] Sterlin-Shry*
- Gordon R & J (1636-52) *Sterlinshyr and Lennox*
- Pont T (1853-1601) *The East Central Lowlands* (Stirling, Falkirk and Kilsyth)
- Ordnance Survey 1st Edition (1865) *Stirling* Sheet XXXV.11 (Combined) 25 inches to one mile (surveyed 1860)
- Ordnance Survey 1st Edition (1865) *Stirling* Sheet XXXV.12 (Combined) 25 inches to one mile (surveyed 1860)
- Ordnance Survey 1st Edition (1865) *Stirling* Sheet XXXV.15 (Combined) 25 inches to one mile (surveyed 1860)
- Ordnance Survey 1st Edition (1865) *Stirlingshire*, Sheet XXXV (with inset of sheet XXXIV) 6 inches to one mile (surveyed 1860)
- Ordnance Survey 2nd Edition (1899) *Stirlingshire* Sheet XXXV SE 6 inches to one mile
- Ordnance Survey 1922 *Lanarkshire* Sheet IV 6 inches to one mile
- Ordnance Survey 1957 *Lanarkshire-Stirlingshire-West Lothian* Sheet NS86 NE 6 inches to one mile
- Ordnance Survey 1967 *Lanarkshire-Stirlingshire-West Lothian* Sheet NS86 NE 6 inches to one mile
- Ordnance Survey 1980 *Lanarkshire-Stirlingshire-West Lothian* Sheet NS86 NE 1:10,000
- Ordnance Survey 1957 *Lanarkshire* NS87 SE 6 inches to one mile
- Ordnance Survey 1967 *Lanarkshire-Stirling-West Lothian* Sheet NS87 SE 6 inches to one mile

Bibliographic

- Glendinning, M & Wade Martins, S (2008) 'Buildings of the Land: Scotland's Farms 1750-2000' Royal Commissions on the Ancient and Historical Monuments of Scotland.
- Kennedy, O & Sommerville, J (2003) 'Bathgate to Newarthill Pipeline: Data Structure Report', Glasgow University Archaeological Research Division (GUARD).

The Landscape Institute (2002) Guidelines for Landscape and Visual Impact Assessment', The Landscape Institute with the Institute of Environmental Management and Assessment. 2nd Edition, London and New York: Spoon Press.

Whyte, I.D. & Whyte, K.A (1991) 'The Changing Scottish Landscape, 1500-1800 (History of the British Landscape)', London: Routledge.

Aerial Photographs

Sortie	Frames	Date	Scale	
CPE/UK/1026	23.08.1947	5003-5008; 5051-5045	1:10,000	B_0182
82/1236	11.07.1955	0256-0262; 0207-0206	1:10,000	B_0419
58/3544	16.05.1960	0220-0230	1:10,666	C_0110
ASS/519/88	07.08.1988	200-203	1:24,000	C_0279
OS75-134	21.05.1975	024-020	1:8,000	OS_75_134

APPENDIX 9.1: Cultural Heritage sites within the proposed wind farm area

Ref no	Site name / type	NMRS No	Easting	Northing	Source	Site description	Sensitivity	Impact Type	Magnitude of Impact	Significance of Impact
1	Wester Burnhead, farmstead	NS86NE 19	288167	669317	NMRS; SMR Historical maps; Aerial Photographs; Field Survey	<p>The NMRS and SMR record that this farmstead, which is situated in rank pasture about 1.2km W of Burnhead, comprises two buildings, forming an L-shaped range, with rig to the S, E and W. The domestic building, which occupies the E arm of the range, has three compartments and is decorated with dressed sandstone quoins; it measures 31m from ENE to WSW by 4.7m transversely within mortared-rubble walls, 0.65m thick and up to 1m high, with an entrance to both N and S. The building on the S arm of the range is similar in construction and measures 25.2m from NNW to SSE by 4.6m transversely, with an entrance on the ENE into the S compartment, wide enough for a cart. The farmstead is depicted as roofed on the Ordnance Survey 1st Edition map (1865), but has been abandoned by the time of the Ordnance Survey 2nd Edition map (1899). The rig covers most of the field, totalling some 22ha in extent.</p> <p>A settlement, annotated as 'West Burnhead' is shown on Grassom's map (1817), Forrest's map (1818) and Ainslie's map (1820). The Ordnance Survey map (1865) shows the farmstead as comprising a roofed L-shaped steading and two enclosures. A well (2) is present to the east of the building and a further large well is also shown immediately S of the farmstead. By the Ordnance Survey 2nd Edition map (1899) the farmstead is depicted as unroofed indicating that it had been abandoned by this date. The ruins of the farmstead are shown on subsequent Ordnance Survey maps.</p> <p>The faint outline of the ruins of an L-shaped steading and associated enclosure are visible on aerial photographs from 1947-1988.</p> <p>Field survey identified the poorly preserved remains of the farmstead which stand in a improved pasture field on the edge of Wester Burnhead Wood. The farmstead comprises of an L-shaped range split into six compartments and measuring 28m long E-W and 18m long N-S. The walls which measure 0.8m thick stand to a maximum height of 1m. The farmstead remains have been much disturbed presumably by animal trampling. The outline of a rectangular enclosure, depicted on the Ordnance Survey 1st Edition map to the SW of the farmstead, is still visible as a relict beech hedge surrounding an area of improved ground.</p>	Low	None	None	None
2	Well		288250	669329	Historical maps	<p>A well is depicted on the Ordnance Survey 1st Edition map (1865) approximately 50m east of Wester Burnhead (1).</p> <p>No trace of the well was found during the field survey.</p>	Negligible	None	None	None
3	Well		288201	669260	Historical maps	<p>A large circular well is depicted on the Ordnance Survey 1st Edition (1865: 25 inch to one mile) map approximately 20 m to the south of Wester Burnhead Farmstead (1).</p> <p>No trace of the well was found during the field survey.</p>	Negligible	None	None	None
4	Track		289883 288074	70290 68925	Historical maps; Aerial Photographs; Field survey	<p>A track running from a settlement at W Burnhead to E Burnhead is depicted on Forrest's map (1818) and Ainslie's map (1820). The Ordnance Survey 1st Edition map (1865) and subsequent maps shows a track, which crosses two fords and a footbridge (6) at Drumtassies Burn, running from Wester Burnhead to Easter Burnhead and then continuing on to Loanhead.</p> <p>A track running from Wester Burnhead farmstead (1) to Easter Burnhead farmstead (3) is visible on aerial photographs from 1947-1988, the route of the track follows a similar alignment of the track depicted on the Ordnance Survey 1st Edition map (1865).</p> <p>Field survey identified a rough farm track, with no permanent surface, running from the</p>	Negligible	Direct (would be crossed by proposed wind farm access track)	Low	Negligible

						public road to the ruins of Easter Burnhead Farm (5) and then continuing on to the site of old mining works (10a/10c). A further branch of track has been constructed running past Easter Burnhead Farm (4) to abandoned opencast workings that lie to the south and outwith the study area.				
5	Easter Burnhead, farmstead		289268	669739	Historical maps; Aerial Photographs; Field survey	<p>A 'farmtoun', annotated as 'Burnhead' is first shown on Pont's map (1583-1601). The same 'farmtoun' is shown on Gordon's map (1636-52), Blaeu's map (1654) and Roy's map (1747-55). By 1817 (Grassom's map) the settlement is annotated as 'East Burnhead'. The same settlement is shown on all later maps including Forrest's map (1818) and Ainslie's map (1820). The Ordnance Survey 1st Edition map depicts a farmstead, annotated as 'East Burnhead', comprising of a roofed rectangular steading surrounded by two enclosures. Two small pools or ponds are shown immediately N of the steading. The farmstead is shown as roofed on subsequent Ordnance Survey maps until 1957 (Ordnance Survey 1:10,000 map). By the 1967 Ordnance Survey map the farmstead is annotated as 'Sheepfold' and two square enclosures are shown abutting the main farm buildings, indicating that the farm is no longer occupied and that the ruins had been modified for sheep management use.</p> <p>A roofed rectangular steading is visible on the aerial photographs dating to 1947-1975. Only the unroofed remains of the farmstead are visible on modern aerial photographic imagery (http://map.google.co.uk).</p> <p>The unroofed ruins of Easter Burnhead Farmstead are present just north of Drumtassie Burn. The ruins of the farmstead are generally well preserved and comprise of a rectangular steading with the remains of two additional out buildings. The buildings are all of stone and mortar construction. The main farmhouse, which sits at the centre of the rectangular steading is 2-storeys high and survives in places to roof level. It is aligned NE-SW and consists of three compartments. An earlier roof line is visible on the NE elevation indicating that it was originally a 1- storey structure. Later brick reinforcements and brick lined doorways are visible throughout the building.</p> <p>Two later (probably post-improvement) long rectangular buildings have been added to either end of the main house to form a rectangular steading. The NE building was last used as a cattle barn and the cattle feeding cubicles are still in situ. The SW barn has been split into two compartments by a brick wall; the NW end of the barn is still partially roofed and has recently been used as an animal shelter.</p> <p>The remains of a single storey stone and mortar building lie to the north of the main farmhouse, at the centre of the rectangular steading.. A further small square stone constructed structure is present just north of the cattle barn. The buildings are much tumbled and their original function is unknown.</p> <p>A terrace, probably originally a garden area, has been built to the south of the steading. A large fence constructed from railway sleepers has been constructed around the farmstead and the remains of a sheepfold of post and wire construction is present to the east of the farmstead ruins. There are several piles of turf covered stone rubble lying around the steading ruins. No trace of two ponds, shown to the north of the farmstead on the Ordnance Survey 1st Edition map, was found.</p>	Low	None	None	None
6	Well		289321	669688	Historical maps	<p>A well is depicted on the Ordnance Survey 1st Edition map (1865) at the SE corner of the main enclosure of Easter Burnhead. The well is depicted on later Ordnance Survey maps until 1922. It is not shown on the 1957 or subsequent Ordnance Survey maps.</p> <p>No formal well was found during the field survey, however a spring was noted in this area and this may have been used as a source of water in the past.</p>	Negligible	None	None	None
7	Lint pool		289703	670409	SMR; Historical	The SMR records that a lint pool is shown on the Ordnance Survey 1st Edition map (1865).	Negligible	None	None	None

					maps	A lint pool is depicted on the Ordnance Survey 1st Edition map (1865). The lint pool was not depicted on the Ordnance Survey 2nd Edition map (1899) suggesting that it gone out of use by this date. No trace of the lint pool was found during the field survey. This area has been disturbed by later 20th century quarry works.				
8	Lint pool		28971	67040	Historical maps	A lint pool is depicted on the Ordnance Survey 1st Edition map (1865) and subsequent maps until 1957. The lint pool is not shown on the 1967 Ordnance Survey map suggesting that it had gone out of use by this date. No trace of the lint pool was found during the field survey. This area has been disturbed by later 20th century works.	Negligible	None	None	None
9	Fencehillhead, farmstead		289003	670622	Historical maps; Aerial Photographs	A settlement, annotated as 'Fencehill', is first shown on Roy's map (1747-55). The same settlement is also shown on Grassom's map (1817), Forrest's map (1818) and Ainslie's map (1820). The Ordnance Survey 1st Edition map (1865) and subsequent maps depict a farmstead, annotated as 'Fencehillhead', comprising of a long rectangular roofed building and an associated enclosure to the S of a public road. A well is shown immediately SE of the farm building. By the 1967 Ordnance Survey map only the rectangular building is depicted. The building appears to be shorter and wider than that recorded on earlier maps suggesting that the previously recorded building had been modified some time during the mid 1900's. The farmstead is not depicted on the 1997 Ordnance Survey map suggesting that it had been abandoned and demolished by this date. A large quarry is depicted on the 1997 map in this area. A long roofed rectangular building is visible on 1947 and 1955 aerial photographs. By the 1988 aerial photographs the farmstead is no longer visible and only the slight outline of a rectangular enclosure, where the farm once stood, is visible. A large quarry is visible immediately east suggesting that the farmstead was abandoned prior to the quarry works. No trace of the farmstead was found during the field survey. This area has been disturbed by later 20th century quarry works.	Negligible	None	None	None
10	Lint pool (possible)		289065	670327	Historical maps	A small rectangular feature is depicted on the Ordnance Survey 2nd Edition map (1899) approximately 500m southwest of Fencehillhead Farmstead (11). The feature is not annotated; however, it is similar in dimension to other lint pools shown in the area on the Ordnance Survey 1st Edition map suggesting that this may also be a lint pool. The feature is not shown on the 1922 Ordnance Survey or later maps. No trace of the lint pool was found during the field survey. This area has been disturbed by later 20th century quarry works.	Negligible	None	None	None
11a-c	Old Mine		288247	669754	Historical maps; Aerial Photographs	The 1957 Ordnance Survey map depicts an 'old mine' just north of the Wester Burnhead Farmstead ruins (1) a track is shown leading from Wester Burnhead to the mine. The same mine is shown on the later 1967 Ordnance Survey map but no longer annotated. The disused mine and track are still depicted on the Ordnance Survey map (2001). A mine is visible on the 1947 aerial photographs along with a roofed rectangular building which is visible immediately S of the mining area. By the 1955 aerial photographs the building is not visible and the mine appears to have been abandoned. The mining area is visible on aerial photographs from 1988 in an area of forestry plantation. Field survey identified the remains of a track (11c) leading to the mine, as depicted on the Ordnance Survey maps, and a small brick built structure (11b) which lies immediately west of the track at NS 88231 69447. The main remains (11a) lie within an area of conifer plantation and access to the mine was not possible.	Negligible	Direct (The remains of a access track (11c) to mine would be crossed by a proposed new wind farm access track between T1 and 2)	Imperceptible	Negligible

					<p>The track (11b) was visible as a turf covered embankment preserved within a forestry ride. The embankment measures 4m wide and approximately 1m high. It follows the route shown on the Ordnance Survey map (2001).</p> <p>The disused mining works (11a) lie within an area of conifer plantation and access to the site was not possible. The remains of a trackway (11b) running to the mine works are however visible as a grass covered embankment within a forestry ride. The track measures 4-5m wide and the embankment along which it runs is approximately 0.8m high. The ruins of an additional small square building (11c) were identified immediately west of a curve in the track (11b) at NS 88231 60447. The building is of brick and concrete construction and has been built into the side of a natural mound. It measures 8m long, 5m high and 1.2-2m deep. The function of the building is unknown, however, given the location of the structure next to the access road for the disused mine (11a) it is likely that the structure is associated with the mining works in this area.</p>				
12	Former coal pit		287810	669709	<p>Historical maps; Aerial Photographs</p> <p>A former coal pit is depicted on the Ordnance Survey 2nd Edition map (1899) within what is now an area of commercial forestry plantation. The coal pit is also depicted on the Ordnance Survey 2001 map as a small mound located within a small forestry clearing. The pit is visible as a grassed over mound on modern aerial photographs. The site was not visited during the field survey.</p>	Negligible	None	None	None
13	Relict rig and furrow cultivation		289059	670105	<p>Aerial Photographs; Field survey</p> <p>The outline of numerous areas of relict rig and furrow cultivation defining several small fields some of which appear to be unenclosed were visible on the 1947 aerial photographs. The rig and furrow correspond with areas of improved land depicted on the Ordnance Survey 1st Edition map (1865). The outline of what may be reverse S-shaped rig is visible in one field just N of East Burnhead Farmstead (3) may be remnants of medieval rig and furrow; while the more straight narrow rig visible within the other areas is more likely to be later in date.</p> <p>The faint outline of rig and furrow cultivation is visible within a field just N of Easter Burnhead Farmstead (5). The rig is aligned N-S, and the wavelength measures 5m wide and 0.2m high. No other rig and furrow cultivation was visible; the area now forms improved pasture fields.</p>	Low	Direct (crossed by proposed access tracks between T3, 4 and 5. In addition the T5 would be positioned towards the centre of the rig remains)	Medium	Minor

APPENDIX 9.2: Key cultural heritage receptors predicted by the ZTV to have theoretical views of the proposed wind farm

Ref no	Site name	Status	Easting	Northing	Distance to nearest turbine (km)	No of turbines visible based on blade tip analysis	Sensitivity of Receptor	Setting	Contribution of setting	Sensitivity of setting	Impact Magnitude	Significance of Predicted Impact
1737	Slamannan, motte	SM	285617	673462	4.5	10 to 13	High	The denuded remains of a medieval motte situated immediately N of Slamannan Parish Church (15311) in a patch of public ground which has been landscaped for recreational use. A path has been constructed around the S and E arcs of the motte, and there is a worn path, leading up to the top of the motte from the W which has caused some diminution of this side of the motte. The motte is sat down in a natural dip at the northern side of Slamannan Village.	Negligible (has been landscaped to form a recreational area)	Low	Imperceptible	Negligible
1902	Craigmailing, cross slab 550m NW of	SM	299091	672726	9.6	10 to 13	High	A stone slab sculptured with a patriarchal cross on both sides. The stone marks the boundary of Torphichen. Today the stone is incorporated in a field wall and is unlikely to be in situ, although it may have stood in the ground at this spot prior to the building of the wall.	Low (incorporated into a modern stone field wall and no longer in situ)	Medium	Imperceptible	Negligible
1903	Torphichen Preceptory, refuge stone at Torphichen Kirk	SM	296841	672503	7.4	10 to 13	High	Square sandstone pillar standing within Torphichen churchyard. One of five refuge stones marking the centre and boundary of the sanctuary associated with Torphichen Preceptory (90305).	High	High	Imperceptible	Negligible
1904	Bathgate Castle	SM	298074	668046	8.6	10 to 13	High	Grass-covered mound denoting the site of Bathgate Castle. Situated on the southern edge of Bathgate. Immediately to the south of the Bathgate railway line and surrounded by a modern golf course.	Negligible (sitting in industrialized landscape)	Low	Imperceptible	Negligible
2283	Bowden Hill ,fort, Linlithgow	SM	297748	674432	9.0	10 to 13	High	The remains of a large fort or 'walled enclosure' formed by a single wall running around the summit of Bowden Hill. The wall is now much robbed. Very similar in style to the fort at Cockleroy (2378) and may be contemporary. Situated in rough pasture, with woodland screening views to the north, west and south of the site.	High	High	Imperceptible	Negligible
2378	Cockleroy, fort	SM	298936	674373	10.0	10 to 13	High	The remains of a fort or 'walled enclosure' situated on the summit of	High	High	Imperceptible	Negligible

Ref no	Site name	Status	Easting	Northing	Distance to nearest turbine (km)	No of turbines visible based on blade tip analysis	Sensitivity of Receptor	Setting	Contribution of setting	Sensitivity of setting	Impact Magnitude	Significance of Predicted Impact
								Cockleroy. The hill is a dominant feature in the surrounding landscape. Situated in rough pasture. Partially screened to the west by woodland on the western slopes of the hill. Very similar in style to the fort at Bowden Hill (2283) and may be contemporary.				
4245	Duntilland Hill, cairn	SM	283185	663946	6.7	10 to 13	High	The remains of a prehistoric burial cairn situated on a very steep slope on the top of Duntilland Hill. Situated in rough pasture approximately 100m northwest of Duntilland Farmstead. Public road to Salsburgh passing the cairn on the east side. Open views out to the surrounding landscape. Salsburgh Village visible 0.5km to the south and the Blackhill TV station and masts are a prominent feature to the north.	Moderate (within farmland and past by public road)	High	Imperceptible	Negligible
4329	Blackbraes, coke ovens, Muiravonside	SM	291541	675484	5.5	10 to 13	High	Former coke ovens situated in an area of flat open rough pasture 500m east of Blackbraes Farm and on the outskirts of Falkirk.	High	High (localized)	Low	Minor
6184	Gala Braes, standing stone	SM	298824	669843	9.0	10 to 13	High	Two standing stones situated in an improved pasture field on the outskirts of Bathgate. One of the stones occupies a conspicuous position on the summit of a ridge; the other stone survives only as a stump on the crown of a sand-hillock. Open views to the west across Bathgate and the open arable land that surrounds the town. A public road runs past approximately 100m to the east.	Moderate (both stones lie in an improved pasture field, and immediately W of public road)	High	Imperceptible	Negligible
7280	Refuge Stone, 300m WNW of Westfield Farm, Westfield	SM	294365	672109	4.9	10 to 13	High	Undressed sandstone boulder. One of the stones marking the boundary of the sanctuary of Torphichen Preceptory. Situated in woodland on the eastern edge of Westfield and adjacent to a large paper mill complex.	Moderate	High	Imperceptible	Negligible
7571	Raven Craig, cairn	SM	299069	670572	9.3	10 to 13	High	The disturbed remains of a substantial cairn situated on the summit of a rocky hillock known as Raven Craig. The cairn is partially surrounded by woodland which limit views to the cairn and out from the site. A public road runs past the site, around 150m	Moderate (situated in woodland)	High	Imperceptible	Negligible

Ref no	Site name	Status	Easting	Northing	Distance to nearest turbine (km)	No of turbines visible based on blade tip analysis	Sensitivity of Receptor	Setting	Contribution of setting	Sensitivity of setting	Impact Magnitude	Significance of Predicted Impact
								to the west.				
8954	Union Canal, River Almond to River Avon	SM	304579	675136	15.5	10 to 13	High	The Union Canal stretch that runs from Lin's Mill Aqueduct to the aqueduct over the River Avon. This stretch of the canal runs through the outskirts of Linlithgow. Localized setting including the canal and the buildings along its length.	High	High	Imperceptible	Negligible
9661	Mid Bracco, deserted farmstead	SM	283333	665694	5.4	10 to 13	High	Pre-improvement farmstead comprising a turf walled building, huts, enclosures and a field system visible as upstanding banks. Situated in rough moorland on the lower northeast slopes of Black Hill, within a natural basin. Overlooked by Blackhill Television Station and masts which is a prominent feature on the summit of the hill immediately southwest of the site. Dense commercial forestry plantation present on its north and east sides. A large bing, part of former Ardenrigg Colliery, is visible just southeast of the site.	High	High (localized)	Imperceptible	Negligible
9664	Mid Bracco, hut circles 350m W of	SM	282846	665797	5.8	10 to 13	High	The remains of two prehistoric hut circles situated in rough pasture on a broad terrace to the west of Mid-Bracco farmstead. Overlooked by the remains of a large bing which forms part of the 19th century Ardenrigg Colliery, present just southwest of the hut circles. Blackhill Television Station and masts is a prominent feature on the summit of Blackhill just southwest of the site.	Moderate (lying in rough pasture but close to old colliery works)	High	Imperceptible	Negligible
9665	Drumfin, deserted settlement 200m W of	SM	282608	666627	5.6	10 to 13	High	The remains of a pre-improvement farmstead comprising two buildings and associated enclosures. Situated in rough pasture at the west end of a terrace on the north side of Drumfin. Just east of Lilly Loch. Situated in open moorland. A large disused quarry is visible to the northwest of the site. Open views from site to Hillend Reservoir and A89.	High	High (localized)	Low	Minor
9666	Thieves Hill, deserted settlement 400m E of	SM	282275	673066	6.7	10 to 13	High	Deserted farmstead remains of pre-improvement date. Visible as low lying remains. The wall of a later	Moderate (later farming feature built	High (localized)	Imperceptible	Negligible

Ref no	Site name	Status	Easting	Northing	Distance to nearest turbine (km)	No of turbines visible based on blade tip analysis	Sensitivity of Receptor	Setting	Contribution of setting	Sensitivity of setting	Impact Magnitude	Significance of Predicted Impact
								drystone sheepfold has been constructed over the north wall of the farmstead remains. Situated in area of forestry to north of Shielknowes Farm.	on top of site, surrounded partially by forestry)			
9675	Avonhead Colliery	SM	280347	669725	7.4	10 to 13	High	Comprises of two pit head bings forming components of Avonhead Colliery of late 19th and early 20th century date. . Visible as upstanding features. Situated in rough pasture just southwest of Avonview Farm. Two large wind turbines already exist just northeast of the site at Greendykes Farm. Rise in topography to the south of the site limits views to the south and southeast.	High	High (localized)	Imperceptible	Negligible
9677	Avonhead Colliery, miners' row	SM	280852	669879	6.9	10 to 13	High	The remains of eight rows of miner houses and a public house associated with Avonhead Colliery. Late 19th to early 20th century date. Visible as upstanding remains. Situated in rough pasture moorland on the S fringes of the fields of Avonhead Farm. Rise in topography to the south limits views to the south and southeast.	High	High (localized)	Imperceptible	Negligible
9680	Lochend Pit No. 5 and bing, 650m SW of Lochend	SM	284897	669387	2.9	10 to 13	High	The remains of Lochend Colliery Pit 5 with a well-preserved bing together with a suite of pit-head buildings. The bing dominates the site. Situated in open rough moorland with open views to the surrounding landscape.	High	High (localized)	Low	Minor
11207	Braefoot Farm, cairn 775m SE of	SM	281696	666884	6.4	10 to 13	High	A prehistoric burial cairn visible as a partially disturbed grassed over mound. It lies on the crest of a ridge of Moffat Hill and overlooks Lilly Loch. Long distant views out to the surrounding landscape. The built up areas of Caldercruix are visible to the north, around 0.5km away, and Hillend Reservoir is visible to the NE.	High	High	Low	Low
11222	Woodend Farm, farmstead 1400m WSW of	SM	291033	668766	2.0	10 to 13	High	The remains of a post-medieval farmstead comprising at least three buildings. Situated within an area of improved pasture on the northeast side of a small hillock.	High	High (localized)	Low	Minor
11223	Craigmarry, farmstead 720m WNW of	SM	291209	670219	1.4	10 to 13	High	The remains of a post-medieval farmstead situated in an area of open farmland. A large industrial works is	Moderate (partial industrialized)	High (localized)	Low	Minor

Ref no	Site name	Status	Easting	Northing	Distance to nearest turbine (km)	No of turbines visible based on blade tip analysis	Sensitivity of Receptor	Setting	Contribution of setting	Sensitivity of setting	Impact Magnitude	Significance of Predicted Impact
								present approximately 300m to the northeast of the farm remains.	surrounding)			
11224	Muckraw, building 200m ESE of	SM	292958	671605	3.4	10 to 13	High	The upstanding remains of a high status medieval building. Situated in an improved pasture field around 200m to the east of Muckraw Farmstead. Surrounded by open arable fields.	Moderate (improved pasture field on fringes of Muckraw Farm)	High	Imperceptible	Negligible
11225	Hilltop House, coal pit 250m NNW of	SM	297907	671643	8.2	10 to 13	High	The poorly preserved remains of a coal pit and associated spoil heaps, situated in an improved pasture field. Lying just west of the public road. Surrounded by open flat arable fields.	High	High (localized)	Imperceptible	Negligible
11242	Castlehorn, fort and standing stones 500m ESE of Torphichen Mains	SM	297443	672448	7.9	10 to 13	High	The remains of a prehistoric hillfort situated on the top of a knoll known as Castlehorn. The Scheduled area also includes two standing stones which mark the trackway that leads from the fort. Situated in rough pasture moorland just south of Gormye Farmstead. Overlooking Torphichen village and the surrounding area.	High	High	Imperceptible	Negligible
11253	Torphichen Bridge, mill, lade + trackway 200m NE of	SM	295700	673628	6.8	10 to 13	High	The remains of a post-medieval mill, lade and trackway. Survives within an area of woodland on the southern bank of the River Avon. Surrounded by flat improved pasture fields.	High	High	Imperceptible	Negligible
90053	Cairnpapple Hill, prehistoric ceremonial complex	SM; Property in Care; Promoted Visitors Site	298726	671746	9.0	10 to 13	High	A complex multi-phase site that ranges from the Neolithic to the early Christian period. The site is situated on the broad summit of Cairnpapple Hill. Excavation of the site during the late 1940s revealed that a henge monument had been constructed during the Neolithic period; the site was then used for burials from the Bronze Age to the early Christian period, with three burial cairns being constructed at the site. The site is a Historic Scotland property in care and promoted as a visitors site. There are open wide views to the west, north and east from the site taking in the Firth of Forth and surrounding flat arable / pasture fields. On a clear day it is reputed that views can extend as far as Arran in the west and to North	High	High	Imperceptible	Negligible

Ref no	Site name	Status	Easting	Northing	Distance to nearest turbine (km)	No of turbines visible based on blade tip analysis	Sensitivity of Receptor	Setting	Contribution of setting	Sensitivity of setting	Impact Magnitude	Significance of Predicted Impact
								Berwick Law and the Bass Rock in the east. A 2nd World War II Nissen hut is present just south of the site and now used as the visitors centre. A later (c. 1960's) telecommunications mast is also present 100m to the west of the monument.				
90305 / 14532	Torphichen Preceptory	SM / Category A Listed; Property in Care; promoted Visitors Site	296886	672533	7.4	10 to 13	High	The remains of the Knights Hospitalers of St John of Jerusalem's Gothic church of 13th to 15th century date. Includes the N and S transepts, domestic cloister and the remains of the choir. Historic Scotland property in care and promoted visitors site. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	High	Imperceptible	Negligible
12989	Woodcockdale, Edinburgh And Glasgow Union Canal Stables And Cottages	Category A Listed	297587	675895	9.6	4 to 6	High	Canal stables and cottages, circa 1820. Forms part of the Glasgow Union Canal. Localized canal setting.	High	High (localized)	Imperceptible	Negligible
14557	Gowan Bank Farmhouse, Steading And Cottage, Dairy And Carriage House	Category A Listed	291648	671168	2.0	10 to 13	High	Farmhouse with U-plan range, circa 1820. Enclosed farm setting. Woodland screens views to west. Open views out to northeast and east to arable farmland.	High	High (localized)	Imperceptible	Negligible
15326	Avon Viaduct	Category A Listed	293350	672686	4.3	4 to 6	High	Railway viaduct carrying main LNE railway over the River Avon. Localized river setting.	High	High (localized)	Imperceptible	Negligible
22125	Bathgate Academy	Category A Listed	297947	668697	8.3	10 to 13	High	Greek Revival Doric Ashler building with clock tower, belfry, and pavilions. Very broad flight of steps to front of building. Dated 1831-3. Situated on eastern edge of Bathgate, overlooking car park and large residential area of Bathgate. Enclosed town setting. Views concentrated on town.	High	High (localized)	Imperceptible	Negligible
51254	East Main Street, Brucefield Church (Church Of Scotland) With Courtyard And Church Halls (Including Former Church)	Category A Listed	294837	664983	7.3	10 to 13	High	Former Free Church dated 1857 and later church halls. Situated in centre of Whitburn town. Enclosed town setting. Views concentrated on town.	High	High	Imperceptible	Negligible
1073	Fannyside Mill	Category B Listed	280991	673351	7.9	10 to 13	Medium	Plain two-storey cornmill, dated 1763. Altered and extended in early 19th century. Currently derelict. Adjacent to public road. Later modern house built just N of mill ruins. Open views to the south across moorland and large swaithes of commercial forestry	Moderate (later modern house adjacent to ruins)	Medium	Imperceptible	Negligible

Ref no	Site name	Status	Easting	Northing	Distance to nearest turbine (km)	No of turbines visible based on blade tip analysis	Sensitivity of Receptor	Setting	Contribution of setting	Sensitivity of setting	Impact Magnitude	Significance of Predicted Impact
								plantations.				
6713	Easter Inch Farmhouse and Steading, Including Farm House, Farmsteading, Farmsteading Cottage and Farmsteading Western Cottage	Category B Listed	298874	667382	9.5	10 to 13	Medium	U-plan steading with courtyard and incorporated farmhouse in north range by Baronial tower. Dated 1869. Situated adjacent to the dual carriageway of the A7066 and roundabout / slip roads for the B702. Large business centre and associated car park areas located c.100m to the east of farmsteading. On outskirts of Balckburn and Bathgate.	Low (surrounded by later industrial features)	Low (localized)	Imperceptible	Negligible
7420 / 14202	Blackburn Village Bridge, River Almond	Category B Listed	298493	665343	10.0	10 to 13	Medium	2 segmental arch bridge crossing River Almond. Dated 1774. Now forms road bridge. Localized setting, views concentrated down river valley.	High	High (localized)	Imperceptible	Negligible
7469	Belsyde House With Lodge, Gatepiers And Boundary Walls	Category B Listed	297460	675492	9.2	10 to 13	Medium	Late 18th century lodge house forming part of Belsyde House estate and policies. Situated adjacent to A706 public road and at entrance to Belsyde House. Main elevations look to the west and east. Partially surrounded by woodland.	High	High (localized)	Imperceptible	Negligible
7480	East Belsyde, Edinburgh And Glasgow Union Canal Bridge 47	Category B Listed	297898	676085	9.9	10 to 13	Medium	Segmental-arched bridge, circa 1820. Forms part of the Glasgow Union Canal. Localized canal setting.	High	High (localized)	Imperceptible	Negligible
12988	48 Woodcockvale, Edinburgh And Glasgow Union Canal Bridge 48	Category B Listed	297414	675827	9.4	10 to 13	Medium	Segmental-arched bridge, circa 1820. Forms part of the Glasgow Union Canal. Localised canal setting.	High	High (localized)	Imperceptible	Negligible
14533	Torphichen Kirk	Category B Listed	296894	672516	7.4	10 to 13	Medium	Traditional T-shaped kirk dated 1756. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	High (localized)	Imperceptible	Negligible
14534	Gate-House Torphichen Kirkyard	Category B Listed	296826	672491	7.4	10 to 13	Medium	Small gate-house dated 1772. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	High (localized)	Imperceptible	Negligible
14540	'Viewforth' High Brae	Category B Listed	296714	672288	7.2	10 to 13	Medium	Early 19th century Georgian house. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	High (localized)	Imperceptible	Negligible
14541	Sundial	Category B Listed	296703	672252	7.2	10 to 13	Medium	Sundial dated 1660. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	High (localized)	Imperceptible	Negligible
14549	Doocot Wallhouse Policies	Category B Listed	296118	672609	6.7	10 to 13	Medium	18th century doocot situated in a flat arable field just northeast of Wallhouse Mansion (19704), and the house policies. Partially screened to the west by a woodland shelterbelt.	High	High (localized)	Imperceptible	Negligible

Ref no	Site name	Status	Easting	Northing	Distance to nearest turbine (km)	No of turbines visible based on blade tip analysis	Sensitivity of Receptor	Setting	Contribution of setting	Sensitivity of setting	Impact Magnitude	Significance of Predicted Impact
14551	Bridge Castle (Little Brighthouse)	Category B Listed	294355	670951	4.6	4 to 6	Medium	Original 16th century castle. Restored in the 19th century and now used as a hotel. Surrounded by designed gardens. Forms part of Bridgecastle settlement (village) and overlooks several other houses around a small common. Localized setting.	High	High (localized)	Imperceptible	Negligible
14554	Old Bedlormio House	Category B Listed	287470	667334	1.6	4 to 6	Medium	Traditional 17th century laird's house. Main elevations to northwest and southeast. Surrounded by later farm buildings. Enclosed farm setting..	Moderate (surrounded by later farm buildings)	Medium (localized)	Low	Minor
14556	Avon Railway Viaduct Near Westfield	Category B Listed	293350	672686	4.3	4 to 6	Medium	Railway viaduct built 1850 over River Avon. Localized river setting.	High	High (localized)	Imperceptible	Negligible
14589	Cathlaw House	Category B Listed	298233	672332	8.7	10 to 13	Medium	18th century traditional house. Surrounded by later farm buildings which form part of a working farm. The main elevations of the house face NNW and SSE.	High	High (localized)	Imperceptible	Negligible
15311	Slamannan Parish Church and St Laurence's Well	Category B Listed	285613	673397	4.5	10 to 13	Medium	Detached session house and small belfry. Dated 1810. Resembles more a 2-storey farmhouse with blacked-out windows. Located within a natural dip at the northern edge of Slamannan Village. Just south of Slamannan Motte (1737). Enclosed village setting. Views concentrated on village.	High	High (localized)	Imperceptible	Negligible
15312	Pirnie Lodge	Category B Listed	287064	672812	3.0	10 to 13	Medium	2-storey farmhouse dated 1735. Later extension adjoining left of building and random stone farm buildings to left. Main elevations to northwest and southeast. Surrounded by other farm buildings. Localized farm setting.	High	High (localized)	Imperceptible	Negligible
15322	Dovecot, Muiravonside House.	Category B Listed	296547	675358	8.4	10 to 13	Medium	17th century dovecot located within the former grounds of Muiravonside Estate, now Muiravonside Country Park. The dovecot is situated just south of the country parks visitor centre and next to a child's play area.	Low (area been developed as a visitors centre and child's play area)	Low (localized)	Imperceptible	Negligible
15323	Candie House, Candiehead	Category B Listed	293520	674209	5.4	4 to 6	Medium	House of probable late 18th century date. Surrounded by woodland.	High	High (localized)	Imperceptible	Negligible
15328	Westfield Railway Viaduct, River Avon	Category B Listed	293350	672686	4.3	4 to 6	Medium	Disused railway viaduct which spans the River Avon. Localized river setting.	High	High (localized)	Imperceptible	Negligible
19704	Wallhouse	Category B Listed	296096	672447	6.6	10 to 13	Medium	Large 2-storey mansion house of early 19th century date. Situated in designed landscape and surrounded	High	High	Imperceptible	Negligible















Ref no	Site name	Status	Easting	Northing	Distance to nearest turbine (km)	No of turbines visible based on blade tip analysis	Sensitivity of Receptor	Setting	Contribution of setting	Sensitivity of setting	Impact Magnitude	Significance of Predicted Impact
								by open arable fields and woodland policies. Views to the west are partially screened by woodland.				
22128	George Street, St David's Church (Church Of Scotland) With Bell Tower, Church Halls And Boundary Walls	Category B Listed	297432	668855	7.8	10 to 13	Medium	Early English Church with campanile and en suite 2-storey church halls. Dated 1904. Situated within centre of Bathgate. Enclosed town setting. Views concentrated on town.	High	High (localized)	Imperceptible	Negligible
22129	Jarvey Street, High Church Of Scotland With Graveyard, Boundary Walls, Railings And Gatepiers	Category B Listed	297555	669115	7.8	10 to 13	Medium	Romanesque church with Gothic pinnacles and entrance tower. Dated 1882-1884. Located within centre of Bathgate. Enclosed town setting. Views concentrated on town.	High	High	Imperceptible	Negligible
42184	Whitburn Parish Kirk (South Church) Manse Road, Including Parish Church, Churchyard, Burial Enclosure	Category B Listed	294697	664590	7.5	10 to 13	Medium	Georgian Church with belfry, built 1729. Situated at centre of Whitburn. Enclosed town setting. Views concentrated on town.	High	High	Imperceptible	Negligible
45918	24-34 (Even Nos) North Bridge Street, The Regal Community Theatre (Former Regal Cinema)	Category B Listed	297257	668906	7.6	10 to 13	Medium	Art Deco former cinema set on sloping site. Completed 1938. In use as a community theatre. Situated within centre of Bathgate. Enclosed town setting. Views concentrated on town.	High	High (localized)	Imperceptible	Negligible
1072	Fannyside Toll	Category C(S) Listed	280395	673577	8.5	10 to 13	Low	Small single storey early 19th century cottage. Adjacent to public road. Main elevations facing northwest and southeast.	High	Medium (localized)	Imperceptible	Negligible
14203	East Whitburn House.	Category C(S) Listed	296029	665105	8.1	10 to 13	Low	Earlier 19th century Georgian House. Situated in housing estate that forms part of East Whitburn town. Enclosed town setting. Views concentrated on surrounding buildings.	Moderate (surrounded by later houses)	Low	Imperceptible	Negligible
14206	Auchingray	Category C(S) Listed	284654	667642	3.3	10 to 13	Low	Ruined classical mansion, circa 1820. Surrounded by woodland policies.	High	Medium (localized)	Imperceptible	Negligible
14535	Jubilee Well, The Square.	Category C(S) Listed	296753	672403	7.3	10 to 13	Low	Well dated 1897, situated in village square of Torphichen village. Enclosed village setting. Views overlooking village.	High	Medium (localized)	Imperceptible	Negligible
14536	Cottages, The Square, N. Side	Category C(S) Listed	296750	672417	7.3	10 to 13	Low	Traditional 19th century cottage. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	Medium (localized)	Imperceptible	Negligible
14537	House, The Square, W Side	Category C(S) Listed	296728	672388	7.2	10 to 13	Low	Georgian House dated 1802. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	Medium (localized)	Imperceptible	Negligible
14538	Rose Cottage (Old Smiddy) Off The Square	Category C(S) Listed	296702	672432	7.2	10 to 13	Low	Cottage, circa 1800. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	Medium (localized)	Imperceptible	Negligible

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14539	Hill House, High Brae	Category C(S) Listed	296738	672298	7.2	10 to 13	Low	Traditional house, circa 18th century. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	Medium (localized)	Imperceptible	Negligible
14542	Torphichen Free Church (Now Church Hall)	Category C(S) Listed	296612	672289	7.1	10 to 13	Low	Norman revival church dated 1843. Derelict building. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	Medium	Imperceptible	Negligible
14550	Cottages, Broomparkwell	Category C(S) Listed	295969	672125	6.4	10 to 13	Low	18th century traditional cottages. Adjacent to B8047 public road. Main elevations looking SSE.	High	Medium	Imperceptible	Negligible
14552	Church Of Christ (Former Free Church)	Category C(S) Listed	289074	667137	2.0	4 to 6	Low	Gothic Church dated 1838. Enclosed village setting. Views concentrated on village. Located on the edge of large village school grounds and partially surrounded by car park for school, to north and east side. Overlooking housing estate to west.	Moderate (surrounded by later school and housing estate)	Low	Low	Negligible
15324	Torphichen Bridge	Category C(S) Listed	295464	673572	6.5	10 to 13	Low	Early 19th century single span bridge crossing River Avon. Now forms a road bridge. Views concentrated down river valley. Localized river setting.	High	Medium (localized)	Imperceptible	Negligible
15327	Compston	Category C(S) Listed	295760	675920	8.2	7 to 9	Low	18th century farmhouse forming part of working farm. Surrounded by later farm buildings. Immediately north of the B825 public road. Main elevation looking at to the NW and SE.	High	Medium (localized)	Imperceptible	Negligible
18189	Low Brae, Ivy Cottage	Category C(S) Listed	296650	672289	7.1	10 to 13	Low	18th century traditional 1-storey cottage. Situated in Torphichen village. Enclosed village setting. Views overlooking village.	High	Medium (localized)	Imperceptible	Negligible
19254	Caldercruix, Main Street, Longriggend And Meadowfield Church Including Gatepiers And Boundary Wall	Category C(S) Listed	281867	667666	6.0	7 to 9	Low	Gothic Church, dated 1890. Situated on south side of Caldercruix. Enclosed village setting. Views concentrated on village.	High	Medium	Imperceptible	Negligible
22126	22 Livery Street Including Outbuildings To Rear	Category C(S) Listed	297419	668971	7.7	10 to 13	Low	Single storey cottage of early 19th century date, with some possible earlier 18th century features. Long range of outbuildings linked to rear. Located within centre of Bathgate. Enclosed town setting. Views concentrated on town.	High	Medium (localized)	Imperceptible	Negligible
22127	9, 11 Mansefield Street	Category C(S) Listed	297376	668962	7.7	10 to 13	Low	Cottage row, the earliest probably of late 18th century date. Converted into a museum in 1998. Located within the centre of Bathgate. Enclosed town setting. Views concentrated on town.	High	Medium (localized)	Imperceptible	Negligible

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45571	Armadale, 50 West Main Street, The Goth	Category C(S) Listed	293661	668598	4.2	10 to 13	Low	Single storey Gothenburgh public house, dated 1924. Main elevation looking out onto Main West Street of Armadale. Enclosed village setting. Views concentrated on village.	High	Medium (localized)	Imperceptible	Negligible
48978	Armadale, Academy Street And High Academy Street, Armadale Primary And Nursery School And Former Infant School Including Boundary Walls And Gatepiers	Category C(S) Listed	293535	668422	4.2	10 to 13	Low	Former Armadale Public School consisting of three school buildings built between 1878 and 1911. Situated at corner of Academy Street and set on an elevated site above Armadale main street, overlooking the town. Enclosed village setting. Views concentrated on village.	High	Medium (localized)	Imperceptible	Negligible
50544	Livery Street, Church Of The Immaculate Conception (St Mary's) (Roman Catholic), Including Boundary Walls, Gatepiers And Railings	Category C(S) Listed	297445	669030	7.7	10 to 13	Low	A gothic church with prominent twin spires and polygonal channel. Dated 1907-8. Later 19th century presbytery building to north. Located within the centre of Bathgate. Enclosed town setting. Views concentrated on town.	High	Medium	Imperceptible	Negligible
50608	Marjoribanks Street, Evangical Union Congregational / United Reformed Church Including Halls, Boundary Walls And Gatepiers	Category C(S) Listed	297749	668973	8.1	10 to 13	Low	Early English Gothic church with twin spirelets and miniature flying buttresses. Dated 1894. Still used as a church today. Located at the eastern edge of Bathgate. Enclosed town setting. Views concentrated on town.	High	Medium	Imperceptible	Negligible
51105	19, 21 George Place, Pavilion Bingo (Former Pavilion Cinema)	Category C(S) Listed	297461	668684	7.8	10 to 13	Low	Gable fronted former picture house (cinema) in plain Classical style. Rare example of post-World War I cinema design. Dated 1920. Situated on western edge of Bathgate within an industrial / shopping area. Enclosed town setting. Views concentrated on town.	High	Medium (localized)	Imperceptible	Negligible



Key:

-  Site Tracks
-  Existing Tracks to be Upgraded
-  Turbine Position
-  Switchgear Building
-  Construction Compound
-  Storage Area
-  Rotor Swept Area
-  High Pressure Gas Pipeline
-  Site Boundary
-  Cultural Heritage Site (Point)
-  Cultural Heritage Site (Linear)
-  Cultural Heritage Site (Area)
-  Area disturbed by 20th Century quarry works
-  Rig and Furrow

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Fig. No: 9.1 Revision: A

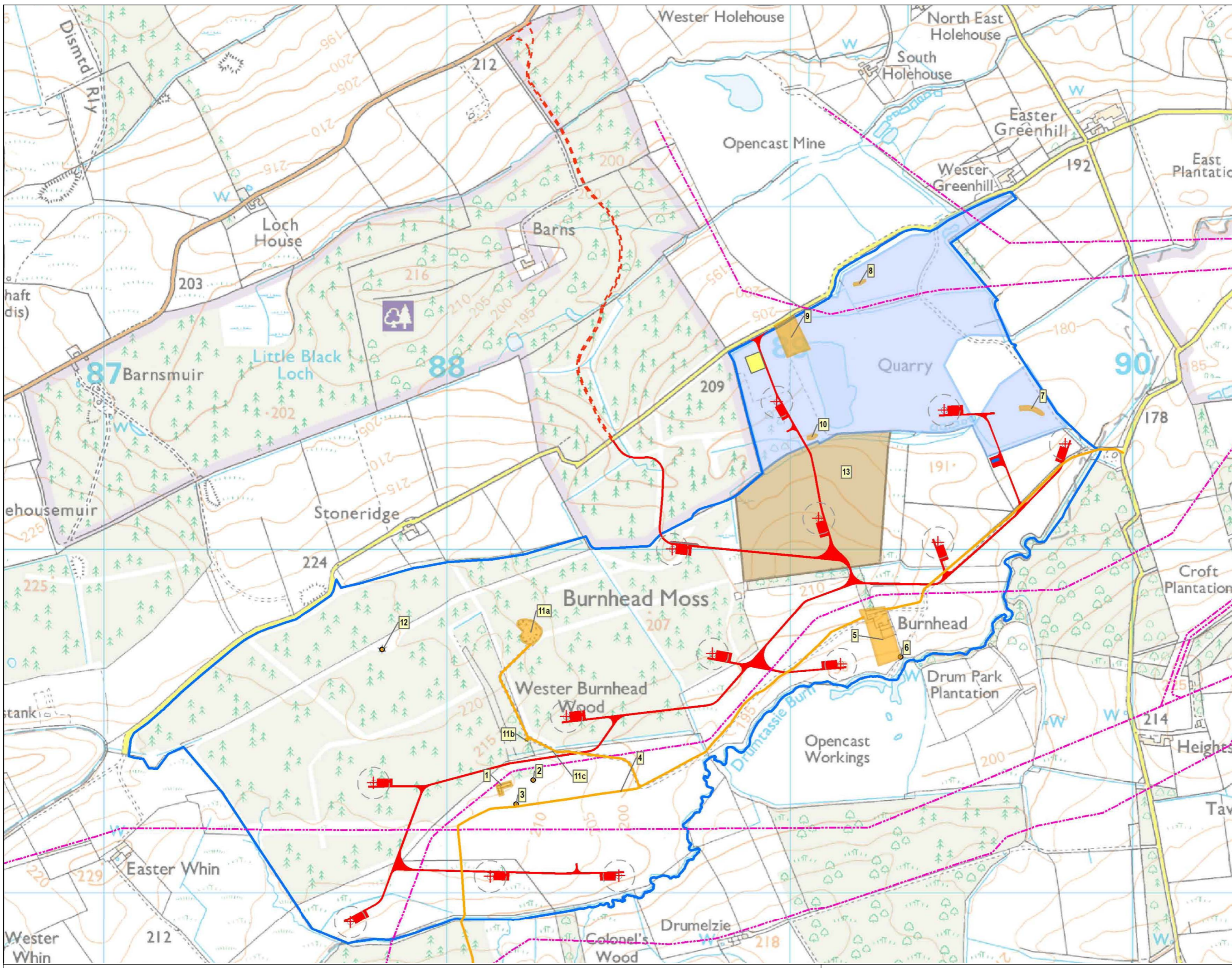
Title: Cultural Heritage: Sites and Features within the Proposed Wind Farm Area

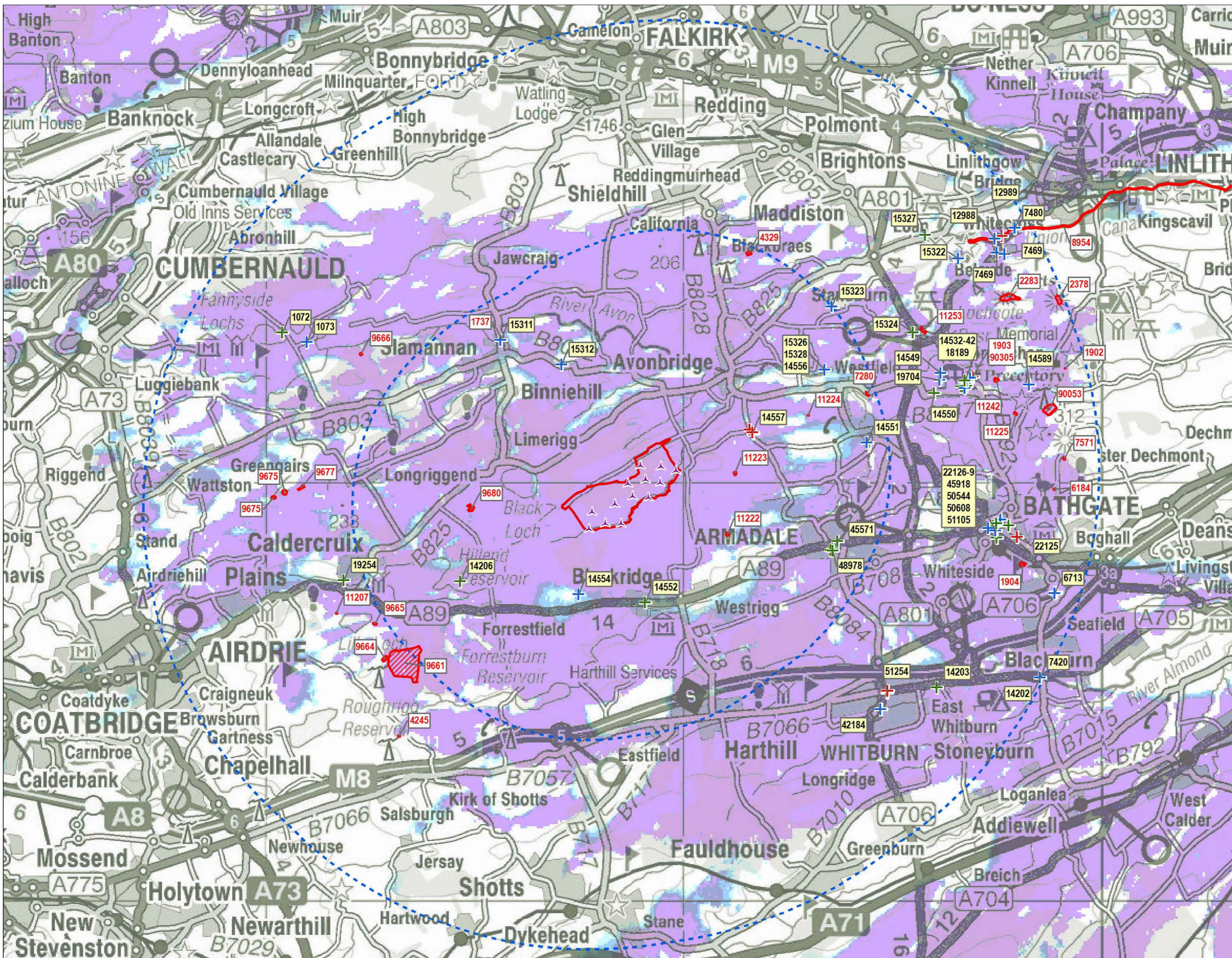
Project: Burnhead Wind Farm

Scale: 1:10,000 @ A3

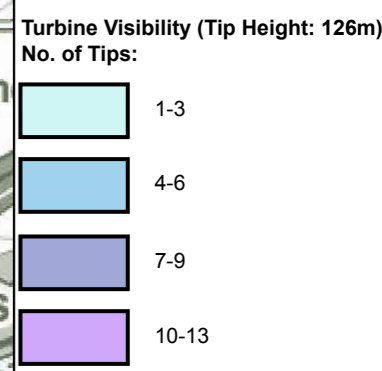
Client: Wind Prospects Development Ltd

Drawn by: SW Report No:





- Key:
- Site Boundary
 - ▲ Turbine Position
 - Scheduled Monument
 - + Listed Building Grade A
 - + Listed Building Grade B
 - + Listed Building Grade C(S)
 - 5 and 10 km Buffer



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Fig. No: 9.2 Revision: A

Title:
 Cultural Heritage: External Receptors Predicted to have Theoretical Views of the Proposed Wind Farm

Project:
 Burnhead Wind Farm

Scale:
 1:80,000 @ A3

Client:
 Wind Prospects Development Ltd

Drawn by: SW Report No:

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