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standard operating procedures.

Proposed Wind Turbine on the Hill of Culbirnie,

Banffshire:

Cultural Heritage Assessment

4.1 EXECUTIVE SUMMARY

4.1.1 The proposed construction of a single wind turbine and associated access track is proposed on the Hill of Culbirnie, Banffshire. There are no predicted direct impacts on cultural heritage assets, and predicted indirect and cumulative impacts on the settings of key receptors in the vicinity are not considered to be significant. Mitigation measures are proposed for potential impacts on any as yet unknown cultural heritage features within the proposed development area.

4.2 INTRODUCTION

4.2.1 This chapter considers the likely impacts on cultural heritage interests of the construction, operation and decommissioning of the proposed Hill of Culbirnie wind turbine. The assessment has been undertaken by CFA Archaeology Ltd, informed by comments and information provided by Historic Scotland and the Aberdeenshire Council Archaeology Service.

4.2.2 The specific objectives of the cultural heritage study were to:

- Identify the cultural heritage baseline.
- Consider the proposed development site in terms of its archaeological and historic environment potential.
- Assess the impacts of the construction, operation and decommissioning of the proposed development on the baseline cultural heritage resource, within the context of relevant legislation and planning policy guidelines.
- Propose measures, where appropriate, to mitigate any predicted significant adverse impacts.

4.2.3 Figure 4.1 depicts the proposed development features and the locations of archaeological sites and monuments identified by the cultural heritage study within the landownership boundary. A gazetteer of those sites is provided as Appendix 4.1.

4.2.4 Figure 4.2 shows the proposed turbine (not shown to scale) in its wider landscape setting together with the zones of theoretical visibility (ZTV) and the locations of key cultural heritage receptors within 5 km of the proposed turbine location that would have a theoretical view of the turbine. Appendix 4.2 contains a list of those key receptors and provides a summary site-by-site assessment of the predicted indirect impacts of the turbine upon the settings of those receptors.

4.3 PLANNING AND LEGISLATION CONTEXT

Context

4.3.1 Scotland's historic environment contributes to the Scottish Government's strategic objectives and to the National Performance Framework. The Scottish Historic Environment Policy (SHEP) document sets out the 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 the historic environment. Through the SHEP, the Scottish Ministers are determined 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.

4.3.2 Cultural heritage resources include sites and features with statutory and non-statutory designations as set out in Scottish Planning Policy (SPP).

Sites with statutory designations include:

- Scheduled Monuments.
- Listed Buildings.
- Conservation Areas.
- Designated Shipwrecks.

Sites with non-statutory designations include:

- World Heritage Sites.
- Inventory Gardens and Designed Landscapes.
- Historic Battlefields.
- Other Historic Environment Interests.

4.3.3 Those relevant to this assessment are Scheduled Monuments, Listed Buildings and other Historic Environment Interests. No Gardens or Designed Landscapes would be directly affected by the proposed development. Indirect impacts on the settings of these sites are assessed in the Landscape and Visual Assessment (see Chapter 7).

Sites with Statutory Designation

Scheduled Monuments

4.3.4 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 national importance. The statutory 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 development works upon the setting of a Scheduled Monument form an important consideration in the granting or refusal of planning consent to conduct development works. Further information on development control procedures relating to Scheduled Monuments is provided in SHEP, SPP and Planning Advice Note 42, Archaeology (PAN 42).

Listed Buildings

4.3.5 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

- 4.3.6 There is a range of other non-designated archaeological sites, buildings, 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 provide national planning policy guidance and advice on the treatment of such resources.

Structure Plan

Regional and Local Planning Policy Guidance

- 4.3.7 The following sections set out the relevant planning policies covering the Local Authority area. Current Regional and Local planning guidance is provided in *Aberdeen City and Shire Structure Plan 2009* and the *Aberdeenshire Local Plan adopted 2006*.

Structure Plan

- 4.3.8 One of the main aims of the Structure Plan is to protect and improve valued assets and resources, including the built environment and cultural heritage. One of the objectives of the Plan is to make sure new development maintains and improves the region's important built and cultural assets and does not lead to the loss of, or damage to, these assets. Local development plans (and supplementary guidance) will make sure the North East's historic sites and buildings continue to be protected and improved.

Local Plan

- 4.3.9 Through Policy ENV\18 all Listed Buildings or structures contained in the Statutory List of Buildings of Special Architectural or Historic Interest for Aberdeenshire shall be protected against any works which would have a detrimental effect on their listed character, integrity or setting by the refusal of listed building consent and/or planning permission. The Council will encourage the protection, maintenance, enhancement, active use and conservation of Listed Buildings. In principle, the Council will be sympathetic to applications, which demonstrate satisfactorily that the proposed development is essential to securing the best viable use of the Listed Building without undermining its architectural or historic character or its setting.
- 4.3.10 Under Policy ENV\19 development which would have an adverse effect on an Ancient Monument or other archaeological sites of either national or local importance or on their settings, will be refused unless:
- a) There are imperative reasons of overriding public interest, including those of a social, environmental or economic nature.
 - b) There is no alternative site for the development.
- 4.3.11 When development is approved, satisfactory steps must be taken to mitigate adverse development impacts, at the developer's expense. Similarly, when development is approved and the preservation of the site in its original location is not possible, the excavation and recording of the site will be required in advance of development, at the developer's expense. Where there is doubt, the developer may be required to provide

further information on the nature and location of the archaeological feature(s) involved prior to determination of the planning application.

4.4 APPROACH TO ASSESSMENT

Data collection and consultation

- 4.4.1 This assessment has been conducted in accordance with the Institute for Archaeologists' Code of Conduct (IfA 2010) and Standard and Guidance for an Archaeological Desk-based Assessment (IfA 2009).
- 4.4.2 Consultation letters and requests for information on cultural heritage assets relevant to the assessment were sent to Historic Scotland and to Aberdeenshire Council's Archaeology Service. 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 landownership area. Details of the locations and extents of Scheduled Monuments, Listed Buildings, Gardens and Designed Landscapes within the proposed development area, and those within 5 km of the proposed site boundary, in GIS, were downloaded from Historic Scotland's GIS spatial data warehouse (<http://hsewsf.sedsh.gov.uk>).
- 4.4.3 Further information on the character and condition of relevant cultural heritage assets was sought from the online Pastmap resource maintained by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) and Historic Scotland (<http://jura.rcahms.gov.uk/PASTMAP/start.jsp>), and from the National Monuments Record of Scotland (NMRS).
- 4.4.4 Ordnance Survey maps and other historic maps held in the Map Library of the National Library of Scotland were examined, to provide information on sites of potential archaeological significance and on historic land-use development.
- 4.4.5 An assessment was made of vertical aerial photograph collections held by the RCAHMS. Sorties dating from 1946, 1954 and 1963 were examined.
- 4.4.6 Bibliographic references were consulted to provide background and historical information. No attempt was made within the remit of this study to conduct detailed historical analysis.
- 4.4.7 The online Historic Land-Use Assessment for Scotland (HLAmap), maintained by the RCAHMS (<http://hla.rcahms.gov.uk>) was consulted for information on the historic land-use character of the proposed development area.
- 4.4.8 The Scottish Palaeoenvironmental Database (SPAD) (<http://xweb.geos.ed.ac.uk/~ajjn/spad>), which records the distribution of known palaeoenvironmental sites across Scotland, was consulted for information on sites containing potential palaeoenvironmental data within or adjacent to the proposed development area.
- 4.4.9 No reconnaissance walk-over field survey or intrusive archaeological interventions have been carried out as part of this assessment. The land within which the turbine and access road would be constructed is presently improved arable fields.

Impact Assessment Methodology

- 4.4.10 The importance of cultural heritage resources relevant to this study is assessed according to the criteria published in SHEP and SPP (Table 4.1).
- 4.4.11 Sites of national importance comprise those sites protected by scheduling under the 1979 Act, and sites of "schedulable quality". Scheduling is an ongoing process and not all sites of schedulable quality are currently scheduled.
- 4.4.12 Sites of regional or local importance are those that do not merit scheduling, but which have significance within a regional or local context. This may, for example, apply to their importance to regional or local history, or they may be the only local example of a monument type. A further category in Table 4.1, sites of lesser importance, covers those archaeological or historic environment features that are of little intrinsic cultural heritage value and/or are poorly preserved examples of site types. Sites of unknown importance are those features which no longer survive as upstanding or surface features but there is the potential for buried remains to survive.
- 4.4.13 Listed Buildings are categorised according to their relative importance (1997 Act; Section 1; SHEP). Category A Listed Buildings are of national or international importance, Category B Listed buildings are of regional or more than local importance, and Category C(S) Listed Buildings are of local importance.

Table 4.1: Sensitivity of Relevant Cultural Heritage Assets

Importance / Sensitivity of receptor	Definition
National/International / High	Sites of national or international importance, including: <ul style="list-style-type: none"> Scheduled Monuments, and sites proposed for scheduling Undesignated archaeological sites and areas of likely national importance identified in HERs/SMRs Category A Listed Buildings
Regional / Medium	Sites of regional importance, including: <ul style="list-style-type: none"> Archaeological sites and areas of distinctive regional importance Category B listed buildings
Local / Low	Sites of local Importance, including: <ul style="list-style-type: none"> Archaeological sites of local importance Category C(S) listed buildings Unlisted historic buildings and townscapes with local (vernacular) characteristics
Lesser / Negligible	Sites of little or no importance, including: <ul style="list-style-type: none"> Sites of former archaeological features Unlisted buildings of minor historic or architectural interest Poorly preserved examples of particular types of feature
Unknown	Sites of unknown importance include: <ul style="list-style-type: none"> Sites that no longer survive as upstanding or surface features but potentially survive as buried remains.

- 4.4.14 The type of impacts of the proposed development on cultural heritage interests have been assessed in the following categories:
- Direct, where there may be a physical impact on a site caused by development. Direct impacts tend to have permanent and irreversible adverse impacts upon cultural heritage remains.

- Indirect, where the setting of a site may be affected.
 - Uncertain, where there is a risk that the works may impinge on a site, for example where it is not clear where the locations or boundaries of a site lie, what the current condition of a site is, or where the precise nature of development works is not known.
- 4.4.15 Impacts have been assessed in terms of their magnitude (see Table 4.2), longevity (permanent / temporary; short-term, medium-term, long-term), reversibility, and nature (adverse / neutral / beneficial).
- Beneficial impacts are those that contribute to the value of a receptor through enhancement of desirable characteristics or the introduction of new, positive attributes.
 - Neutral impacts occur where the development can be accommodated comfortably by the receiving environment while neither contributing to nor detracting from the value of the receptor.
 - Adverse impacts are those that detract from the value of a receptor through a reduction in or disruption of valuable characterising components or patterns, or the introduction of new inappropriate characteristics.
- 4.4.16 The assessment of significance of predicted impacts of the proposed development on individual cultural heritage receptors has been undertaken using two key criteria: importance/sensitivity of receptor and magnitude of impact.
- 4.4.17 Thresholds of magnitudes of impact are described in Table 4.2.

Table 4.2: Magnitude of impact

Magnitude of impact	Definition
High	Major changes to the baseline condition of the receptor, leading to total or fundamental alteration of character or setting.
Medium	Material changes to the baseline condition of the receptor, leading to partial alteration of character or setting.
Low	Minor detectable changes which do not alter the baseline condition of the receptor materially.
Imperceptible	A very slight and barely distinguishable change from baseline conditions, approximating to the "no change" situation.

- 4.4.18 Table 4.3 combines the criteria from Tables 4.1 and 4.2 to provide a matrix for the assessment of whether or not an impact is considered to be significant. In the table Moderate and Major impacts are considered to be significant.

Table 4.3: Criteria for assessing the significance of impacts on cultural heritage features

Magnitude of Impact ▼	Significance of impact			
High	Minor	Moderate	Major	Major
Medium	Negligible	Minor	Moderate	Major
Low	Negligible	Negligible	Minor	Minor*
Imperceptible	Negligible	Negligible	Negligible	Minor

Sensitivity▶	Negligible	Low	Medium	High
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* this impact is assessed as minor since a low magnitude, non-material effect cannot by its nature lead to an effect that is significant.

Cumulative Assessment

- 4.4.19 The assessment of cumulative impacts on the cultural heritage is based upon consideration of the impacts of the proposed development on the settings of sites with statutory and non-statutory designations in the wider landscape in addition to the likely impacts of other operational, consented and proposed wind turbine developments currently in planning within the ZTV for the proposed development. The assessment took into account the relative scales, i.e. size, and number of turbines, of the various other developments, their distances from the affected receptors, and the potential degree of visibility.
- 4.4.20 The assessment employed a selection of wireframe visualisations and photomontages from key receptors from which some degree of visibility of the proposed development was predicted, to gauge the degree of visibility and the impact exerted on the receptor by the various cumulative developments. The criteria adopted above were employed to determine the magnitude and significance of the predicted impacts.

4.5 BASELINE CONDITIONS

- 4.5.1 Seven sites of cultural heritage significance have been identified within the landownership boundary (Figure 4.1; Appendix 4.1).
- 4.5.2 There is no Scheduled Monument or Listed Building present within the proposed development area, and no part of the proposed development area lies within a Conservation Area or a Garden and Designed Landscape.
- 4.5.3 There are four Scheduled Monuments, two Category A Listed Buildings, ten Category B Listed Buildings and six Category C(S) Listed Buildings within 5 km of the proposed wind turbine site (Figure 4.2; Appendix 4.2). In addition, there is one Scheduled Monument beyond 5 km that Historic Scotland have requested be considered as part of the assessment (see para. 4.5.5 below).
- 4.5.4 Numbers in brackets, in the following sections, refer to site numbers provided on Figures 4.1 and 4.2, and in Appendices 4.1 and 4.2.

Consultation responses

- 4.5.5 In response to the consultation letter, Historic Scotland (01/02/11) confirmed that there are no cultural heritage sites or features within their remit within the landownership boundary. They identified four nationally important sites in the wider landscape that may be indirectly affected by the proposed development and requested that they be taken into consideration as part of the assessment. These sites are:
- Scheduled Monument of Hill of Alvah cairns (Index no. 11034).
 - Scheduled Monument of Stirling Cairn, cairn 750 m SW of Mill of Alvah (Index no. 11035).
 - Scheduled Monument of Duff House (Index no. 90104) and its Garden and Designed Landscape.
 - Category A Listed Inchdrewer Castle.

- 4.5.6 In response to a consultation letter (12/01/11) Aberdeenshire Council Archaeology Service confirmed that there are no sites recorded within the proposed development area although stated that there is the potential for prehistoric remains on Hill of Culbirnie as it is one of the more prominent hills in the area. They also identified that the setting of Inchdrewer Castle may be affected by the proposed development.

Sites within the Landownership Area

- 4.5.7 The NMRS and SMR contain no records relating to cultural heritage sites or features within the landownership boundary.
- 4.5.8 Examination of cartographic sources identified seven sites: the farmsteads of Culbirnie (**1**), Easter Culbirnie (**2**), and Cowfords (**3**); a building (**4**); two wells (**5, 6**); and a mill lade and dam (**7**).
- 4.5.9 Aerial photographs provided additional information on sites identified on the cartographic sources.
- 4.5.10 The Historic Land-Use Assessment records that the proposed development area is composed of 18th-19th century crofting land and 18th-19th century rectilinear fields which were later amalgamated into larger fields which comprise the current landscape.
- 4.5.11 The Scottish Palaeoenvironmental Database (SPAD) provided no relevant information specific to the proposed development area.

Character of cultural heritage remains

- 4.5.12 The sites and features identified by the study within the landownership boundary are associated with medieval or later agricultural activity.

Farmsteads

- 4.5.13 Culbirnie farmstead (**1**) dates from at least the mid 18th century although the layout of the buildings has changed over time. Easter Culbirnie (**2**) and Cowfords (**3**) are both shown on maps dating to the early 1800s. All of the farmsteads are visible on aerial photographs and appear to still be in use.

Miscellaneous

- 4.5.14 Several other cultural heritage sites and features have been identified by this study. A building (**4**), wells (**5, 6**) and a mill lade and dam (**7**) to the south of Cowfords, are all depicted on early Ordnance Survey maps. None of these features are visible on aerial photographs or current OS map coverage, suggesting that no visible features remain.

Assessment of the Importance of Cultural Heritage Features

- 4.5.15 Using the criteria detailed in Section 4.4 (Table 4.1), Appendix 4.1 includes a column which provides an assessment of the importance of each cultural heritage site identified by the study.
- 4.5.16 There are no nationally or regionally important cultural heritage features within the landownership area.
- 4.5.17 Three cultural heritage sites - the farmsteads of Culbirnie (**1**), Easter Culbirnie (**2**) and Cowfords (**3**) - are considered to be of local importance and low sensitivity as they form upstanding components of the historic landscape.

- 4.5.18 Four features (**4-7**) are considered to be of lesser importance as individually they are of no especial archaeological merit, but together provide an additional historical character to the landscape.

Assessment of Archaeological Potential of the Landownership Area

- 4.5.19 The proposed development is located in arable farmland which surrounds the farms of Culbirnie, Easter Culbirnie and Cowfords. The landownership area predominantly consists of enclosed arable fields.
- 4.5.20 Seven sites of cultural heritage significance have been identified by this study within the landownership area. They all relate to the post-medieval, rural farming landscape. There are no known prehistoric sites or features within the area but the NMRS records numerous prehistoric sites and features in the vicinity of the proposed development. These include: findspots of Bronze Age swords (NJ66SW 2) at least one of which was found near Blairshinnoch, flint arrow heads, axeheads and Roman coins (NJ66SE 4) found near Easter Culbeuchly, a Neolithic axehead (NJ66SE 43) found at Wester Culbeuchly, Neolithic arrowheads (NJ66SW 10) found in the neighbourhood of Boyndie; a Bronze Age barrow (NJ66SW 5) to the north at West Blairshinnoch, the cropmark of a possible souterrain (NJ66SE 90) and pit circle (NJ66SE 91) to the north-east at Fiskaidly; a possible ring ditch (NJ66SW 22) to the north-east at Hilton; a ring ditch and souterrain (NJ66SW 23) to the north near Blairshinnoch; and cropmarks of an enclosure, pits, ring ditches, souterrains and an unenclosed settlement approximately 3 km to the east near Lower Inchdrewer (NJ66SE 223).
- 4.5.21 Roy's map (1747-55) indicates that the area was under cultivation during the mid 1700s, suggesting that the land-use has changed little since this time. The HLAmap indicates that the area comprises 18th to 19th century crofting land and rectilinear fields which were later amalgamated to create large fields which comprise the current field layout.
- 4.5.22 Given the sites and features recorded in the landownership area and the historic and current land-use of the proposed development site it is considered that the potential of as yet, undetected, buried remains to survive within the landownership area is moderate. However, taking into account the limited land-take required by the proposed wind turbine and access track, the probability of construction works encountering hitherto undiscovered buried sites of archaeological significance is considered to be low.

Key receptors in the vicinity of the Proposed Development Area

- 4.5.23 Within 5 km of the proposed development and having theoretical visibility of the proposed turbine there are four Scheduled monuments, two Category A Listed Buildings, ten Category B Listed monuments and six Category C(S) Listed Buildings. In addition, there is one Scheduled Monument beyond 5 km that Historic Scotland have requested be considered as part of the assessment. A list of these receptors is presented in Appendix 4.2.

4.6 IMPACTS AND MITIGATION

Assessment of Impacts within the Landownership Area

Direct Impacts

- 4.6.1 The assessment of predicted impacts has been carried out with reference to the proposed development layout shown on Figure 4.1.

- 4.6.2 Any ground-breaking activities associated with the construction of the proposed development (such as those required for the turbine base and crane hardstanding, access track, cable route, 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, adverse, permanent and irreversible impacts on the cultural heritage.

- 4.6.3 There is no predicted direct impact on any of the cultural heritage features identified within the landownership area.

- 4.6.4 There is no direct impact predicted during the decommissioning of the wind turbine, assuming that the existing road infrastructure is used for the dismantling and removal of the built features of the proposed development.

Indirect Impacts

- 4.6.5 There is no indirect impact predicted on any of the cultural heritage features identified within the landownership boundary.

Uncertain Impacts

- 4.6.6 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 consideration the known sites and features recorded in and in close proximity to the proposed development there is moderate potential for as yet undetected archaeological remains to survive as buried features within the landownership area. However given the limited extent of the proposed ground disturbance that would be generated by the construction of the access track and turbines base, the likelihood of construction works encountering remains of archaeological significance is considered to be low.

- 4.6.7 Mitigation through archaeological monitoring of ground works in specified areas (agreed in advance with Aberdeenshire Council) would offset the potential impacts through the identification and recording of any surviving remains prior to their loss.

Assessment of Impacts on External Receptors

- 4.6.8 A list of those external receptors present within 5 km of the proposed development and predicted by the ZTV to have theoretical views of the turbine is provided in Appendix 4.2; the locations of the receptors are shown on Figure 4.2. Appendix 4.2 provides a summary assessment of the predicted impacts on a site-by-site basis.

- 4.6.9 The identification of potentially affected receptors listed in Appendix 4.2 has been based on the analysis of the blade tip ZTV. The ZTV model is, however, a coarse predictive tool based on bare-earth surface topography and maximum blade-tip height. It takes no account of obstructions to intervisibility caused by existing forestry and other vegetation, or buildings and other man-made features.

- 4.6.10 The likely magnitude and significance of impacts resulting from the proposals on those sites identified by Historic Scotland to be specifically assessed in the ES, and the majority of the other receptors present within 5 km (see Appendix 4.2), have been assessed using wireframe visualisations. A photomontage visualisation from Inchdrewer Castle was also produced to aid assessment of the likely effect of the proposed development upon the setting of that receptor (**Viewpoint 11: Landscape and Visual**

Impact Assessment (LVIA) Figure 7.17). A photomontage visualisation from Duff House was not produced as a site visit found that trees entirely screened the proposed development location from view at ground level. Therefore, professional judgement has been used to assess the significance of impacts.

- 4.6.11 The proposed turbine would stand on the slope of Hill of Culbirnie which is a prominent topographic feature in the immediate landscape. The ZTV indicates that the proposed development would be visible from all directions but most prominent from the north and west. Many of the key cultural heritage receptors in the area are located in arable farmland with open views of the surrounding landscape.

Scheduled Monuments

Hill of Alvah cairns (Index no. 11034)

- 4.6.12 The site consists of two cairns situated on the west shoulder of Hill of Alvah, in an area of rough pasture. The westernmost survives as a large grass covered mound of earth and small stones measuring approximately 16 m in diameter 2 m high whereas the easternmost has been almost completely removed and all that remains is a mutilated area approximately 20 m in diameter with traces of stones. The current setting of the cairns comprises the rough pasture field within which they stand and the open farmland surrounding them, and the relationship between the two cairns. Views to the west and northwest, towards the proposed turbine, are partly screened by trees and views to the east are blocked by the Hill of Alvah.

- 4.6.13 The proposed wind turbine would stand around 3.5 km to the west of the cairns. The presence of the proposed development would not affect the immediate setting of the cairns and, although a wireframe visualisation (Figure 4.3) indicates that the proposed turbine would be visible in views from the cairns to the west, the presence of the turbine would not detract from an appreciation or understanding of the receptor. The impact on this high sensitivity receptor is considered to be adverse, but of low magnitude and of minor significance.

Stirling Cairn (Index no. 11035)

- 4.6.14 The site consists of a long cairn approximately 64 m long and 1.2 m high orientated north-south. It is located on and follows a prominent ridge along the eastern brow of the hill of Alvah. The current setting of the cairn includes the pasture field in which it stands and the surrounding farming landscape. Views from the cairn are mainly to the north and east as the Hill of Alvah rises up to the south and southwest, reducing views in those directions.

- 4.6.15 The proposed wind turbine would stand around 4.2 km to the west of the cairn. Although the ZTV indicates that the turbine would be visible from the site, a wireframe visualisation (Figure 4.4) in fact shows that there would be no visibility. On that basis no impact is predicted on the setting of Stirling Cairn.

Duff House (Index no. 90104)

- 4.6.16 Duff House dates to the 1700s and is a Category A Listed Building as well as a Scheduled Monument. It stands in its Inventory Garden and Designed Landscape (see Chapter 7) located on the west bank of the River Deveron, to the south of Banff. Views from the House are to the south across the parkland and a golf course. Views to and from the house are mostly screened by tree cover within the garden.

- 4.6.17 The proposed wind turbine would stand around 6.7 km to the WSW of the House. A wireframe visualisation indicates that the turbine would be visible in views from the House to the WSW; however, a site visit for the purposes of generating a photomontage visualisation found that trees entirely screened views from the House to the proposed turbine location (**Viewpoint 12: LVIA Figure 7.18**). Based upon this observation it is assessed that the presence of the proposed development would affect neither the immediate setting of the House, as this is provided by the Designed Landscape, nor an understanding and appreciation of the context of the House. No impact is predicted.

Category A Listed Inchdrewer Castle

- 4.6.18 Inchdrewer Castle, a tower house, dates to the 16th century and has been partially restored. It stands in an arable field close to Inchdrewer Farm and is a prominent feature in the surrounding, mostly arable, landscape. The current setting of the castle is provided by this open arable landscape with extensive views in all directions. It has clear views all around although the land rises to the south and east, towards the Hill of Firfolds. The castle is approached from the east along a farm track and the entrance faces south-east, away from the proposed turbine development.

- 4.6.19 The proposed wind turbine would stand around 2.6 km to the west of the castle. The presence of the proposed development would not affect the immediate setting of the castle but would be seen as part of the wider landscape. A photomontage visualisation (**LVIA Figure 7.17**) confirms that the proposed turbine would be visible in views from the Castle, but would not substantially change the open landscape views, which already contain existing turbines and overhead power lines. The presence of the turbine would not detract materially from an appreciation or understanding of the architectural, historic or landscape context of the castle. The impact on this high sensitivity receptor is considered to be adverse, but of low magnitude and of minor significance.

- 4.6.20 Summary impact assessments relating other receptors present within 5 km are presented in Appendix 4.2. Taking into account the analyses above, and Appendix 4.2, no significant impacts have been predicted on the setting of cultural heritage receptors in the landscape. There would be no significant impacts on the settings of external receptors as a result of the presence of the proposed development.

Cumulative Impacts

- 4.6.21 Cumulative impacts on the cultural heritage resource result from changes to the baseline setting of the resource caused by the proposed wind turbine in conjunction with other existing and future developments.

- 4.6.22 The cumulative wind farm map indicates that there are eight operational windfarms, six consented or under construction windfarms and 15 applications for windfarms within 25 km of the proposed development at Hill of Culbirnie.

- 4.6.23 The nearest windfarms to the proposed Hill of Culbirnie turbine would be the operational windfarms of Strath of Brydock Windfarm (3 turbines) to the south-east, Boyndie Windfarm (7 turbines) and proposed extension (1 turbine) to the north, and the proposed developments of Blairshinnoch (1 turbine) and Backhill (1 turbine) immediately to the north-east.

- 4.6.24 The proposed development, and the proposed Blairshinnoch and Backhill wind turbines are adjacent to each other and would be visible as a group in views from the surrounding landscape. Together with the Strath of Brydock and Boyndie Wind Farms

these developments would have the most impact on the setting of the monuments identified within the 5 km ZTV for the proposed Hill of Culbirnie turbine, particularly in the area between Boyndie and Strath Brydock.

- 4.6.25 Taking the operational, consented and other submitted applications within 25 km of the proposed Hill of Culbirnie development, the contribution of this proposal to the total cumulative impact on key cultural heritage receptors would be of low magnitude and minor significance.
- 4.6.26 The following section assess the likely cumulative impacts on the settings of those nationally important cultural heritage assets identified by Historic Scotland, with the exceptions of Stirling Cairn and Duff House where analyses above (paragraphs 4.6.15 & 4.6.17) have confirmed that the presence of the proposed Hill of Culbirnie turbine would have no impact upon their settings.

Hill of Alvah cairns (Index no. 11034)

- 4.6.27 The remains of Hill of Alvah cairns stand around 3.5 km from the proposed Hill of Culbirnie turbine development. Views to the west and north-west would theoretically include the proposed development, together with the existing windfarms at Strath of Brydock and Boyndie and the proposed Backhill and Little Blairshinnoch turbines (Figure 4.3). They would be seen in the same arc of view as part of a row of turbines along the skyline. The closest wind development would be Strath of Brydock, which is prominent in views south-west from the cairns.
- 4.6.28 The cairns stand on a small hill within an area of rough pasture with some screening provided by trees to the west. The addition of the proposed Hill of Culbirnie turbine to the existing landscape, between the existing windfarms of Strath of Brydock and Boyndie when viewed from the cairns, would amount to a cumulative impact of low magnitude and minor significance on the setting of the cairns.

Category A Listed Inchdrewer Castle

- 4.6.29 Inchdrewer Castle stands in an arable field close to Inchdrewer Farm and is a prominent feature in the surrounding, mostly arable, landscape. The current setting of the castle is provided by this open arable landscape with extensive views in all directions. Wireframe and photomontage (LVIA Figure 7.17) visualisations indicate that the proposed Hill of Culbirnie turbine would be theoretically visible together with the existing windfarms of Strath of Brydock and Boyndie and the proposed turbine developments of Backhill and Little Blairshinnoch.
- 4.6.30 The current setting of Inchdrewer Castle includes the surrounding landscape which already contains two windfarm developments (Strath of Brydock and Boyndie). The addition of the proposed Hill of Culbirnie turbine, along with the proposed turbines at Backhill and Little Blairshinnoch, in views west from the Castle, between the existing windfarms of Strath of Brydock and Boyndie, would amount to a cumulative impact of low magnitude and minor significance.

Mitigation Strategy

- 4.6.31 In accordance with guidance contained in SPP and PAN 42, the preferred option for mitigation is preservation of important remains *in situ* where practicable and by record where preservation is not possible. The mitigation measures presented below take account of this planning guidance.

Construction Phase

- 4.6.32 An appropriate strategy for construction phase archaeological mitigation, as required by any relevant planning condition attached to granting of planning consent, would be set out in a written scheme of investigation (WSI) and agreed with Aberdeenshire Council in advance of the commencement of the development works.

Operational Phase

- 4.6.33 No mitigation is required during the operation of the turbine.

Decommissioning Phase

- 4.6.34 No mitigation is required during the decommissioning of the turbine, assuming that the existing road infrastructure is used for the dismantling and removal of the built features of the proposed development.

Residual Impacts

- 4.6.35 Provided that appropriate mitigation measures are undertaken there are no predicted residual direct impacts on cultural heritage interests within the proposed development area. No mitigation has been proposed in relation to indirect and cumulative effects, and hence residual impacts would be as for those predicted without mitigation, and not significant, long-term temporary and ultimately reversible, lasting for the lifetime of the proposed development and removed by its decommissioning.
- 4.6.36 Provided that appropriate mitigation measures are undertaken there are no predicted residual direct impacts on cultural heritage interests within the proposed development area.

4.7 STATEMENT OF SIGNIFICANCE

- 4.7.1 Seven sites of cultural heritage interest have been identified by the assessment within the landownership area including the proposed development location. These sites relate to medieval and later agricultural activity and are considered to be of no more than local importance and low sensitivity. None of these sites and features is predicted to receive a direct impact from the proposed development.
- 4.7.2 Four Scheduled Monuments, two Category A Listed Buildings, ten Category B Listed Buildings and six Category C(S) Listed Buildings within 5 km of the proposed wind turbine have theoretical visibility of it. Historic Scotland identified one further Scheduled Monument beyond 5 km which they requested is considered as part of the assessment. None of these sites is predicted to receive a significant indirect or cumulative impact on its setting from the proposed development.
- 4.7.3 Mitigation measures have been presented to offset any potential direct impacts on as yet undiscovered buried archaeological sites which may survive within the proposed development area.

4.8 REFERENCES AND DATA SOURCES

Cartographic

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Thomson, J. 1826 *Northern Part of Aberdeen and Banff Shires.*

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Historic Scotland's GIS spatial data warehouse - <http://hsewsf.sedsh.gov.uk>

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

HLAmap - <http://hla.rcahms.gov.uk>

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

Vertical Aerial Photographs

Sortie	Frames	Date	Scale
106G/UK/0107	3063-3065	23/5/46	1:10000
106G/UK/0108	4175-4177	23/5/46	1:10000
106G/UK/0169	3423-3427	26/8/46	1:10000
58/1512	F21 0219-0221	26/7/54	1:10000
82/1024	F21 0218-0220	23/9/54	1:10000
OS63-165	170-175	20/7/63	1:10000

APPENDIX 4.1: Cultural Heritage sites and features within the development area

Site No	Site Name / Type	Easting	Northing	Source	Site description	Site Importance / Sensitivity	Impact Type	Impact Magnitude	Significance of Impact
1	Culbirnie Farm	36265	86060	Maps; aerial photographs	'Colbirney' is depicted and annotated on Roy's map of 1747-55. 'Culbirnie' is depicted and annotated on Robertson's map of 1822 and on Thomson's map of 1826. 'Culbirnie Parks', comprising a large roofed building set round a courtyard, a rectangular roofed building and an enclosure, is depicted on the Ordnance Survey 1 st (1871) and 2 nd (1904) Edition maps. Culbirnie Farm is visible on aerial photographs dating from 1946, 1954 and 1963, and on modern aerial photographs. The farm is still in use.	Local / Low	None	None	None
2	Easter Culbirnie	36274	86036	Maps; aerial photographs	'Easter Culbirnie' is depicted on Robertson's map of 1822 and on Thomson's map of 1826. Easter Culbirnie, comprising a large roofed building set round a courtyard, an enclosure and a well, is depicted on the Ordnance Survey 1 st (1871) and 2 nd (1904) Edition maps. It is visible on aerial photographs dating from 1946, 1954 and 1963, and on modern aerial photographs. The settlement is still in use.	Local / Low	None	None	None
3	Cowfords	36296	86002	Maps; aerial photographs	'Cowford' is depicted and annotated on Robertson's map of 1822 and on Thomson's map of 1826. 'Cowfords', comprising a large L-shaped building, two roofed buildings and an enclosure, is depicted on the Ordnance Survey 1 st (1871) and 2 nd (1904) Edition maps. It is visible on aerial photographs dating from 1946, 1954 and 1963, and on modern aerial photographs. The farm is still in use.	Local / Low	None	None	None
4	Building	36232	86025	Maps	A small roofed building is depicted on the Ordnance Survey 1 st Edition map (1871). The building is not depicted on the Ordnance Survey 2 nd Edition map or current maps and is not visible on aerial photographs.	Lesser / Negligible	None	None	None
5	Well	36255	86054	Maps	A well is depicted to the WSW of Culbirnie Parks on the Ordnance Survey 1 st Edition map (1871). The building is not depicted on the Ordnance Survey 2 nd Edition map or current maps and is not visible on aerial photographs.	Lesser / Negligible	None	None	None
6	Well	36308	86049	Maps	A well is depicted on the Hill of Culbirnie on the Ordnance Survey 2 nd Edition map (1904). The building is not depicted on the current map and is not visible on aerial photographs.	Lesser / Negligible	None	None	None
7	Mill dam and lade	36289	86000	Maps	A mill dam and lade are depicted to the south-west of Cowfords on the Ordnance Survey 2 nd Edition map (1904). Neither the dam nor the lade are depicted on the current map or visible on aerial photographs.	Lesser / Negligible	None	None	None

APPENDIX 4.2: Key receptors within 5km of the development area

Site No*	Site Name / Type	Easting	Northing	Status	Site Importance / Sensitivity	Distance to the turbine (km)	Impact Type	Impact Magnitude	Significance of Impact
345	St Brandan's Stanes, stone circle	360750	861055	Scheduled	National / High	2.4	I, A, T, L, R	Low	Minor
5779	Hills of Boyndie, barrows & enclosures 700m SW of Mill of Boyndie	365849	863654	Scheduled	National / High	4.4	I, A, T, L, R	Low	Minor
11034	Hill of Alvah, cairns 1350m WSW of Mill of Alvah	366522	860176	Scheduled	National / High	3.5	I, A, T, L, R	Low	Minor
11035	Stirling Cairn, cairn 750m SW of Mill of Alvah	367287	860162	Scheduled	National / High	4.2	None	None	None
90104	Duff House	369072	863274	Scheduled	National / High	6.7	None	None	None
3049	Inchdrewer Castle	365598	860714	Category A Listed	National / High	2.6	I, A, T, L, R	Low	Minor
6662	South Colleonard	366635	862668	Category A Listed	National / High	4.3	I, N, T, L, R	Low	Minor
3051	Lower Inchdrewer	365833	861116	Category B Listed (Group B Listed)	Regional / Medium	2.9	I, N, T, L, R	Imperceptible	Negligible
3233	Boyndie, Parish Church	364149	863862	Category B Listed	Regional / Medium	3.7	I, N, T, L, R	Low	Minor
3234	Boyndie Parish Church Former Beadle's Cottage and Steading	364200	863800	Category B Listed	Regional / Medium	3.7	I, N, T, L, R	Low	Minor
3235	Boyndie, St Brandon House	364274	863860	Category B Listed	Regional / Medium	3.8	I, N, T, L, R	Low	Minor
3238	Banff, Ladysbridge Hospital	364975	863807	Category B Listed	Regional / Medium	4.0	I, N, T, L, R	Low	Minor
3241	Mains of Baldavie	362112	861202	Category B Listed	Regional / Medium	1.3	I, A, T, L, R	Low	Minor
18785	Cornhill, Mid Street, Gordon Arms Hotel	358428	858177	Category B Listed	Regional / Medium	5.1	I, N, T, L, R	Imperceptible	Negligible
18788	Cornhill, Mid Street, Hay Memorial Hall	358534	858167	Category B Listed	Regional / Medium	5.0	I, N, T, L, R	Imperceptible	Negligible
49835	Banff (Boyndie) Airfield, Control Tower	362301	864221	Category B Listed (Group B Listed)	Regional / Medium	4.0	I, N, T, L, R	Low	Minor
49836	Banff (Boyndie) Airfield, Operations Block	362365	863360	Category B Listed	Regional / Medium	3.1	I, N, T, L, R	Low	Minor
3047	Beechgrove and War Memorial	362316	858302	Category C(S) Listed	Local / Low	2.1	I, N, T, L, R	Low	Negligible
3048	Duff House, Eagle's Gate Lodge	367146	861621	Category C(S) Listed	Local / Low	4.3	I, N, T, L, R	Imperceptible	Negligible
6660	The Manse of Ord	362248	858447	Category C(S) Listed	Local / Low	2.0	I, N, T, L, R	Low	Negligible
18782	Cornhill, 3 and 5 Mid Street	358618	858205	Category C(S) Listed	Local / Low	4.9	I, N, T, L, R	Imperceptible	Negligible
18783	Cornhill, 8 Mid Street, Manse	358716	858302	Category C(S) Listed	Local / Low	4.8	I, N, T, L, R	Imperceptible	Negligible
18790	Cornhill, Mid Street, Ordiquhill and Cornhill Parish Church	358681	858302	Category C(S) Listed	Local / Low	4.8	I, N, T, L, R	Imperceptible	Negligible

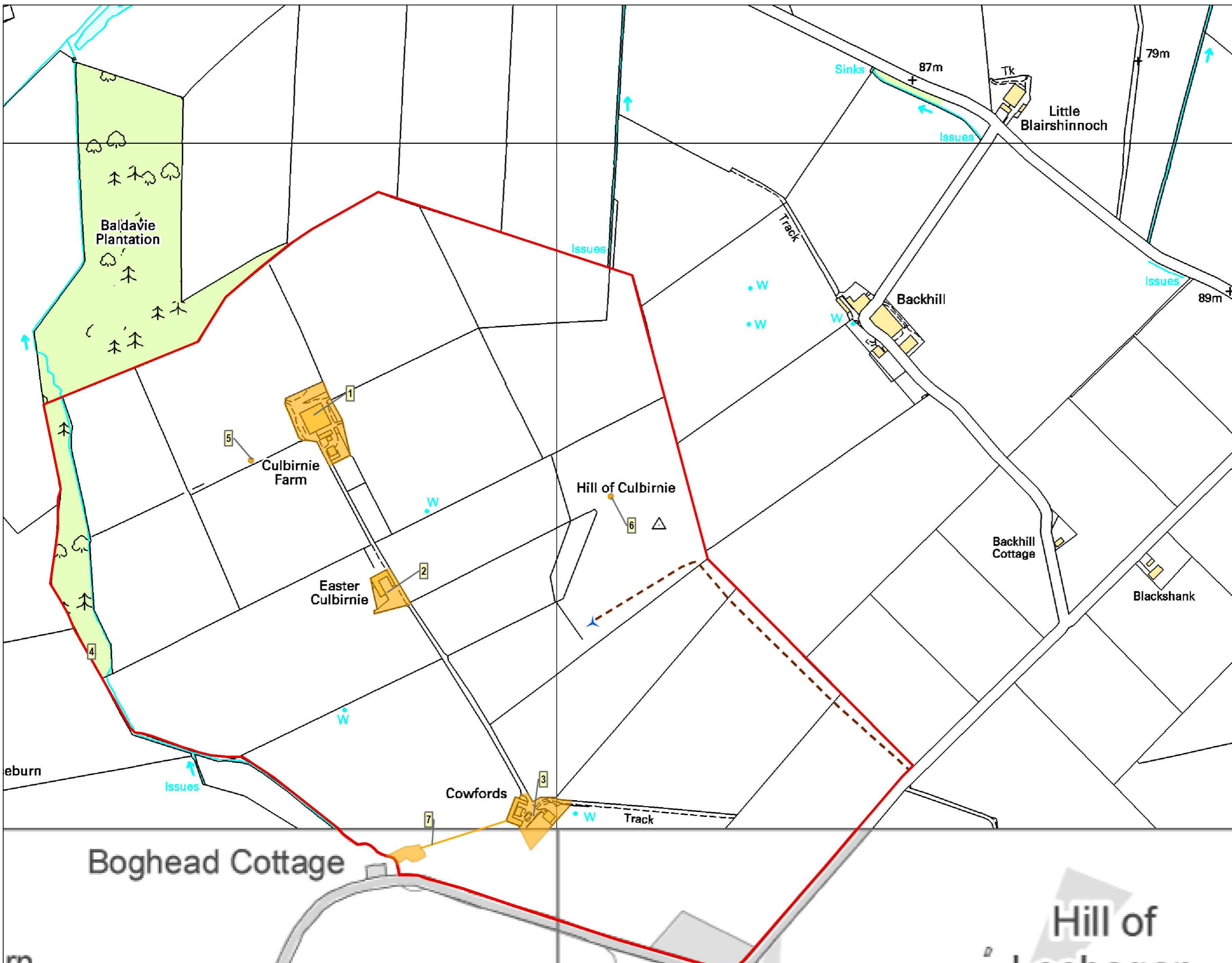
Key –I, indirect; A, adverse; N, neutral; T, temporary; L, long term; R, reversible

* Site numbers in bold were assessed by use of a wireframe visualisation; the assessment of 3049 was also aided by photomontage visualisation



Key:

- Landownership boundary
- Turbine Location
- Access Track
- Cultural Heritage Site (point)
- Cultural Heritage Site (area)
- Cultural Heritage Site (linear)



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Fig. No: 6.1 Revision: A

Title:
Cultural Heritage: Internal Constraints

Project:
Hill of Culbirnie Wind Turbine

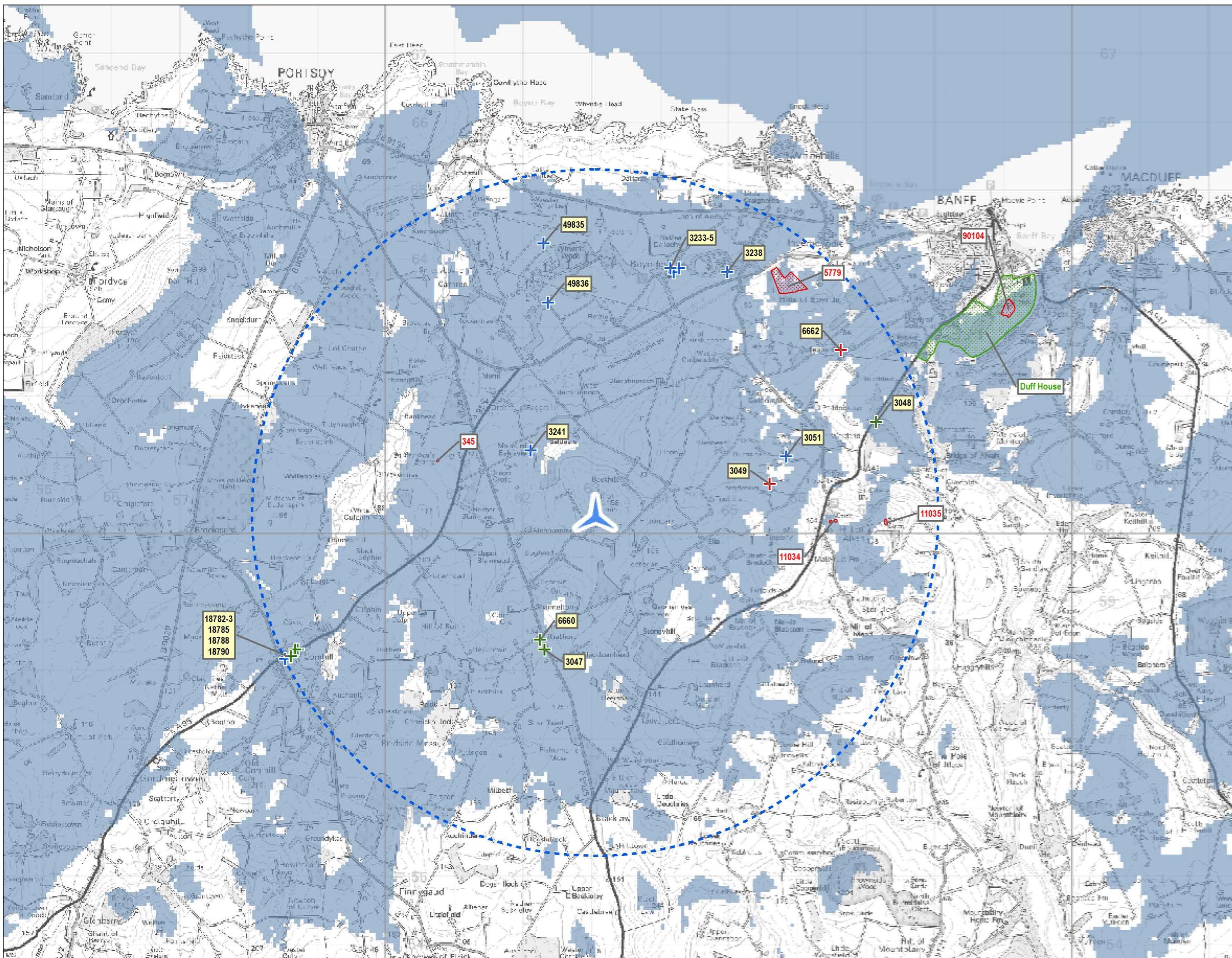
Scale:
 1:5,000 @ A3

Client:
Atmos Consulting

Drawn by: SW Report No:



- Key:
- Turbine Location (not to scale)
 - Scheduled Monument
 - Listed Building Category A
 - Listed Building Category B
 - Listed Building Category C(S)
 - Garden and Designed Landscape
 - 5km Buffer
 - Turbine tip visible



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Fig. No: 6.2 Revision: A

Title:
Cultural Heritage: External Receptors and ZTV

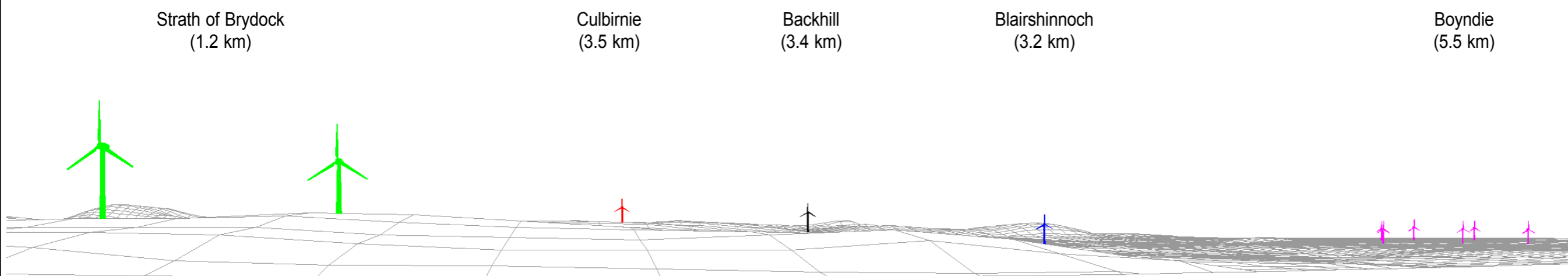
Project:
Hill of Culbinnie Wind Turbine

Scale:
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Fig. No:	6.3	Revision:	A
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Title:
**Hill of Alvah, cairns (11034)
 Wireline**

Project:
Hill of Culbirnie Wind Turbine

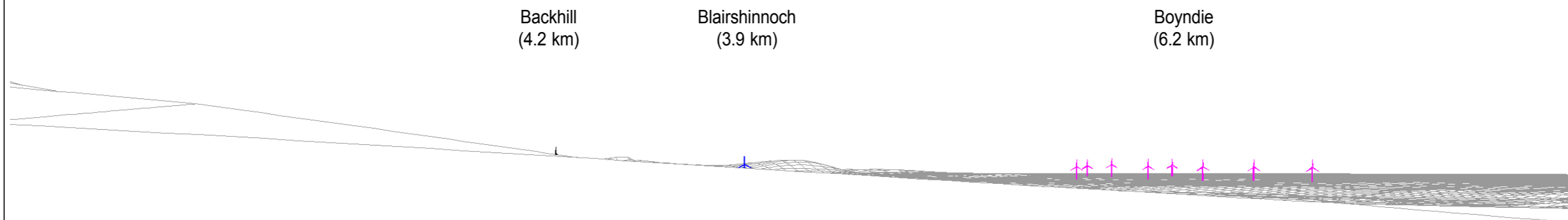
Scale:

Client:
Atmos Consulting

Drawn by:	SW	Report No:	
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Key:



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Fig. No: **6.4** Revision: **A**

Title:
Stirling Cairn (11035) Wireline

Project:
Hill of Culbirnie Wind Turbine

Scale:

Client:
Atmos Consulting

Drawn by: **SW** Report No: