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Bamff Windfarm Cultural Heritage Assessment

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Bamff Windfarm

Cultural Heritage Assessment

11.0 Cultural Heritage

11.1 Introduction

1. This chapter considers the effects of the proposed Bamff Windfarm on cultural heritage. Cultural heritage resources include sites with statutory and non-statutory designations as set out in Scottish Planning Policy (SSP).
2. Sites with statutory designations that are relevant in the context of this assessment include:
 - Scheduled Monuments;
 - Listed Buildings;
 - Conservation Areas.
3. Sites with non-statutory designations and relevant in the context of this assessment include:
 - Gardens and Designed Landscapes and other important historic landscapes;
 - Historic Battlefields;
 - Non Statutory Register sites;
 - Other Historic Environment Interests.
4. Those specifically relevant to the following assessment are:
 - Scheduled Monuments;
 - Listed Buildings;
 - Gardens and Designed Landscapes.
5. The specific objectives of the cultural heritage assessment were:
 - to identify the cultural heritage baseline within, and in the vicinity of, the Development Area;
 - assess the Development Area in terms of its archaeological and historic environment potential;
 - consider the potential and predicted effects of the construction and operation, including effects on setting, of the Development on the baseline cultural heritage resource;
 - propose measures, where appropriate, to mitigate any predicted significant effects.
6. This chapter was prepared with reference to the relevant statutory and planning frameworks for cultural heritage and informed by comments and data provided by Historic Scotland and other consultation bodies as detailed.
7. This chapter is supported by a number of appendices, which are referenced in the text.
8. Planning policies of relevance to this assessment are identified in **Chapter 5: Planning Policy Context**.

11.1.1 Study Area Description

9. The study area comprises two distinct parts:

- The Development Area, which covers approximately 229 hectares of land north of Bamff and within which the Development is located. The Development Area is shown on **Figure 11.1** and consists principally of moorland and rough pasture grassland, small enclosed areas of mature coniferous forestry and more extensive areas of newly planted forestry. This study area was used for the assessment of direct effects from the construction of the Development
- A wider study area, extending to 10km from the outermost turbines was defined as the study area for the identification of external receptors whose settings may be affected by the Development. Sites with designations of national or regional importance (Scheduled Monuments, Category A and B Listed Buildings, Conservation Areas, and Inventory Gardens and Designed Landscapes) within a 10km radius of the Development are assessed. The study area extent was agreed as being appropriate by Perth & Kinross Heritage Trust (PKHT) and Aberdeenshire Council Archaeology Service (ACAS) (who provide curatorial advice to Angus Council), and has also been used for the assessment of cumulative effects.

10. **Figure 11.1** shows the layout of the Development and the locations of archaeological and historic environment sites and features identified by the cultural heritage study. A gazetteer of these is provided as **Appendix 11.1**.

11. **Figure 11.2** shows the development in its wider landscape setting together with the zone of theoretical visibility (ZTV) and the locations of cultural heritage receptors within the study areas defined above and from which there would be a theoretical view of the development. Cultural heritage receptors that are predicted by the ZTV to have no views of the Development are not shown. **Appendices 11.2** and **11.3** contain a list of those receptors and provide a summary assessment of the predicted effects on their settings, on a site by site basis.

11.1.2 Effects Assessed in Full

12. The following effects have been assessed in full:

- Direct effects on all cultural heritage interests, with either statutory or non-statutory designations, within the Development Area.
- Effects on the setting of cultural heritage assets including Scheduled Monuments; Listed Buildings; Conservation Areas; Gardens and Designed Landscapes (GDL); and that have been identified from the ZTV to have a theoretical intervisibility with the turbines.
- Cumulative effects on the setting of cultural heritage resources of the Development in combination with other windfarms that are either operational, consented, under construction or at the planning application stage.

11.1.3 Effects Scoped Out

13. On the basis of the desk based and survey work undertaken, the professional judgment of the EIA team, experience from other relevant projects and policy guidance or standards, the following topic areas have been 'scoped out', as proposed in the Scoping Report:

- Disturbance from vibration, dewatering or changes in hydrology resulting in indirect effects on cultural heritage sites and features.
- Effects on the settings of cultural heritage receptors more than 10km from the proposed Development. No assets beyond 10km were specified for assessment by Historic Scotland and none whose settings would be significantly affected by the development were identified during the study.

11.2 Assessment Methodology

11.2.1 Data Sources and Guidance

14. This assessment was conducted in accordance with the Institute for Archaeologists Code of Conduct (Ref.11-1), and Standard and Guidance for Archaeological Desk-based Assessment (Ref. 11-2).
15. A number of information sources were consulted as part of the desk-based work. These include:
- The National Monuments Record of Scotland (NMRS, Ref.11-3);
 - The Perth and Kinross Council Historic Environment Record (HER);
 - The Archaeology Service for Aberdeenshire, Moray and Angus Sites and Monuments Record (SMR);
 - Ordnance Survey maps (principally 1st and 2nd Edition), and other published historic maps held in the Map Library of the National Library of Scotland;
 - Unpublished historic maps held in the National Archives of Scotland;
 - Vertical aerial photographs held by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS);
 - Published bibliographic sources, including early descriptions of the area (Statistical Accounts, Parish records);
 - The Scottish Palaeoecological Database (Ref.11-4);
 - The Historic Land-use Assessment data for Scotland (HLAMAP) (Ref.11-5);
 - Other appropriate sources of information (e.g. local archives, archaeological/historical societies).

11.2.2 Field Survey

16. A reconnaissance field survey of the Development Area (RCAHMS Level 1 survey: Ref. 11-6) was undertaken in April 2011.
17. The aims of the field survey were to:
- locate all visible cultural heritage sites, monuments and landscape features, both those identified during the desk-based assessment and those previously unrecorded, and to record their character, extent and current condition;
 - identify areas with the potential to contain unrecorded, buried archaeological remains, taking into account factors such as topography, geomorphology and ground conditions;
 - inform the assessment of the possible effects of the proposed Development on the features identified.
18. A field visit was carried out during the site survey (April 2011) to assess the character and sensitivity of the settings of cultural heritage assets up to 10km from the Development that were indicated by the ZTV to have theoretical intervisibility of the turbines, and to assess the effects of the Development on those settings. The field visit focused on those cultural heritage sites most likely to receive significant effects on their settings (i.e. those closest to the Development and those specifically identified as requiring assessment by Historic

Scotland). No sites were identified as requiring assessment by PKHT or ACAS. Factors considered in the assessment of the setting undertaken during the field visit include:

- the location and orientation of the assets;
- important views of, or from, principal façades of Listed Buildings;
- the importance, if applicable, of designed settings;
- any obvious views or vistas.

11.2.3 Consultation

19. Scoping responses, raising cultural heritage issues, were received from Historic Scotland and from Perth and Kinross Council. Further responses, to consultation enquiries regarding the methodology and scope of the assessment, were received from Historic Scotland, PKHT and ACAS (Summaries of these responses are provided in **Table 11.1** below:

Table 11.1: Consultation Responses

Consultee	Scoping / Consultation	Issue Raised	Response / Action Taken
Perth and Kinross Council	Formal Scoping Consultation	No response regarding archaeology and cultural heritage.	Follow-up consultation undertaken with PKHT (see below).
Historic Scotland	Formal Scoping Consultation	<p>Provided comment in respect of their statutory remit at the national level - Scheduled Monuments and their settings, category A listed buildings and their settings, and gardens and designed landscapes appearing in the Inventory.</p> <p>Provided a list of 13 Scheduled Monuments and one garden designed landscape that should be considered in terms of the impact on their settings. That list included:</p> <p>Scheduled Monuments:</p> <p>Craighead, settlement and field system 900m N of (Index No. 5581)</p> <p>Parkneuk, two stone circles 550m E of (Index No. 1505)</p> <p>East Drimmie, stone circle 650m ENE of (Index 1537)</p> <p>Redlatches, settlement and field system 1700m S of (Index No. 4673)</p> <p>Redlatches, settlement and field system 1900m SSE of (Index No. 4640)</p> <p>Easter Cammock, settlements, field systems and cairn 650m SW of</p>	<p>This chapter considers potential effects on those aspects of the historic environment that fall within the remit of Historic Scotland.</p> <p>Noted: see paragraph 1.6.1.1 to 1.6.1.10).</p>

Consultee	Scoping / Consultation	Issue Raised	Response / Action Taken
		(Index No. 4586) Kilry, standing stone 100m NNE of Kilry School (Index No. 124) Barry Hill, fort (Index No. 1591) Glenballoch Cottage, standing stone E of (Index No. 1549) Craighall, stone circle NE of Sawmill of Craighall (Index No. 1525) Cairn Plew, cairn 1350m NW of Wester Coul (Index No. 6842) Middleton Muir, settlements, field systems, cairns and deer dyke (Index No. 5396) Cairn Motherie, cairn, Creigh Hill (Index No. 6343) Gardens and Designed Landscapes: Craighall Rattray Requested that the assessment include cumulative impacts on historic environment assets	This chapter considers the cumulative impacts on historic environment assets (see also the CZTV Figure 6.24).
Historic Scotland (18/10/11)	Further consultation	Confirmed that there were no additional comments to those provided in original Scoping Response Advised that there may be cultural heritage receptors beyond 10km which may have significant impacts upon their settings. None were specified as being of particular concern, and none were identified in during the course of the study	Noted Noted. No cultural heritage receptors beyond 10km whose settings might be affected by the development were identified during study.
Perth and Kinross Heritage Trust (03/10/11)	Further consultation	Confirmed that a 10km radius assessment zone for the identification of key external receptors whose settings might be significantly affected, is an acceptable assessment distance	Noted (see ZTV Figure 11.2).
Aberdeenshire Archaeology Service (04/10/11)	Further consultation	Confirmed that they were happy with the methodology being used with respect to cultural heritage. Would be happy with a 5km assessment zone for non-designated sites whose settings might be affected; however, do not anticipate any sites within 5km of the development will raise any issues	Noted.

Consultee	Scoping / Consultation	Issue Raised	Response / Action Taken
		within the EIA process.	
Strathearn Archaeology Society	Consultation	No response received.	
Kirriemuir Heritage Trust	Consultation	No response received.	

11.2.4 Assessing Significance

11.2.4.1 Value/Sensitivity of Cultural Heritage Assets

20. The assessment of value/sensitivity of archaeological and heritage assets reflects the relative weight which statute and policy attach to them, principally as published in Scottish Planning Policy (SPP) and Scottish Historic Environment Policy (SHEP). **Table 11.2** summarises the relative value/sensitivity of key cultural heritage assets.

Table 11.2: Value/Sensitivity of Cultural Heritage Asset

Value/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; Category A Listed Buildings; Gardens and Designed Landscapes (Inventory sites); Outstanding Conservation Areas; Designated wreck sites; Historic Battlefields.
Medium	Sites of regional importance, including: Archaeological sites and areas of distinctive regional importance; 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.

11.2.5 Assessment of Direct (Construction) Effects

11.2.5.1 Criteria for Assessing Magnitude of Direct (Construction) Effects

21. Criteria for assessing the magnitude of an effect, which measures the degree of change to the baseline condition of the heritage asset that could result from the construction of one or more elements of the Development, are presented in **Table 11.3**.

Table 11.3: Magnitude of Effect

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.

11.2.5.2 Criteria for Assessing Significance of Direct (Construction) Effects

22. The sensitivity of the receptor defined in **Table 11.2** and the magnitude of the predicted effects defined in **Table 11.3** are used to inform, using professional judgment, the likely significance of the direct effect. **Table 11.4** summarises the criteria for assigning significance of a direct effect. Major and moderate effects are considered to be significant in terms of the EIA Regulations (Ref-11.7).

Table 11.4: Significance of Direct (Construction) Effects

Magnitude of Effect ▼	Value / Sensitivity of Receptor ►			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Imperceptible	Minor	Negligible	Negligible	Negligible

11.2.6 Assessment of Effects on Setting (Operational) Effects

23. The setting of a heritage site, feature or area is defined as “the immediate and extended environment that is part of, or contributes to, its significance and distinctive character” (Ref.11-8). Beyond the physical and visual aspects, the setting includes interaction with the natural environment; past or present social or spiritual practices, customs, traditional knowledge, use or activities and other forms of intangible cultural heritage aspects that create and form the space as well as the current and dynamic cultural, social and economic context.
24. Historic Scotland’s guidance document Managing Change in the Historic Environment: Setting (Ref. 11-9) notes that “setting should be thought of as the way in which the surroundings of a historic asset or place contribute to how it is experienced, understood and appreciated. Setting often extends beyond the immediate property boundary of a historic structure into the broader landscape”. The guidance also suggests that if a proposed development is likely to affect the setting of a cultural heritage asset, an objective written assessment should be prepared by the applicant to inform the decision-making process. The conclusions drawn should take into account the significance of the historic asset and its setting and attempt to quantify the extent of any detrimental effect. The methodology and level of information should be tailored to the circumstances of each case.
25. For each receptor where a potential effect on setting has been identified, the assessment of possible effects has adopted a four-stage approach:

- identification of the characteristics of the setting of the receptor;
- assessment of the sensitivity of that setting;
- identification of how the presence of the proposed Development will affect that setting (magnitude of effect);
- assessment of significance of effect.

11.2.6.1 Criteria for Assessing Sensitivity of Setting

26. Sensitivity of setting has been assessed by considering two factors:
- the relative weight which statute and policy attach to the receptor and its setting;
 - the degree to which the baseline setting contributes to the understanding and/or appreciation, and hence value, of the receptor.
27. The relative weight that statute and policy attach to the receptor and its setting was determined using the value/sensitivity of archaeological and heritage resources set out in **Table 11.2**.
28. The degree to which the baseline setting contributes to the understanding and/or appreciation of the receptor has been assessed according to the criteria set out in **Table 11.5**.

Table 11.5: Contribution of Setting to Understanding and 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.
Moderate	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, such as of a commercial coniferous single species woodland or industrial development, that are not relevant to understanding the context of the receptor.

29. These two criteria in **Tables 11. 4 and 11.5** are combined to assess the overall sensitivity of a setting, as set out in **Table 11.6**

Table 11.6 Sensitivity of Setting of a Receptor

Value / 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

11.2.6.2 Identification of Magnitude of Effect on Setting of a Receptor

30. Where it has been determined 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 is not considered further in the assessment. For the remaining receptors, the magnitude of effect on setting was assessed according to the thresholds set out in **Table 11.7**.

Table 11.7: Magnitude of Effects on Setting

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

11.2.6.3 Criteria for Assessing Significance of Effects on Setting

31. The significance of effect on setting depends on both the magnitude of effect and the sensitivity of the setting of the receptor. **Table 11.8** presents the matrix that was used to inform the determination of the significance of effects on setting.

Table 11.8: Significance of Effects on Setting

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

11.2.6.4 Significance Criteria

32. The proposed criteria for determining the significance of effects; both direct and effects on settings, are provided in **Table 11.9**. Effects considered to be of major or moderate significance are deemed to be significant in terms of the EIA Regulations (Ref. 11-10).

Table 11.9: Effect Significance

Significance of Effect	Description
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.

11.2.7 Cumulative Assessment

33. The assessment of cumulative effects on cultural heritage is based upon consideration of the residual effects of the Development on the settings of sites with statutory and non-statutory designations within 10km of the Development in addition to the likely effects of other operational, consented and proposed windfarm developments currently in planning . The assessment takes 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 from each receptor of the various developments. The assessment includes the Drumderg windfarm, the Scotston single wind turbine and the two wind turbines at Mitchelin Tyre Factory, all of which are operational. It also includes Griffin, Tullymurdoch, Welton of Creuchies; East Gormack, Carrach and Ardlebank which are at various stages of development.
34. The assessment employed the cumulative ZTV (**Figure 6.24**) and a selection of visualisations from key receptors from which some degree of visibility of the Development was predicted, to gauge the degree of visibility and the effect exerted on the receptor by the various developments. The criteria adopted above in respect of effects on setting were employed to determine the magnitude and significance of the total predicted effects.

11.3 Existing Conditions

11.3.1 Baseline Conditions within the Development Area

35. The majority of the sites within the Development Area are associated with medieval or later settlement and agricultural activity. However, there is some evidence of prehistoric activity within the Development Area. Detailed descriptions of the sites and features are provided in **Appendix 11.1**, their locations are shown on **Figure 11.1** and they are discussed thematically below.
36. The Historic Landscape Assessment Map (HLAMap) does not yet cover this part of Scotland. However, observations from historical maps (principally the Ordnance Survey 1st and 2nd Editions), aerial photographs and field survey shows that prior to the late 19th century the Development Area consisted mainly of mixed woodland with small areas of unimproved scrubland and moorland along the southern boundary. The woodland in the southern and western parts of the Development Area, across Hilton Hill and to the north of Little Bamff and Kinkeadly seems to have been cleared in the early 20th century; the current forestry plantations appearing from the 1970's onwards.

37. The current land-use is moorland and rough pasture grassland, with small enclosed areas of mature coniferous forestry and newly planted forestry to the west and south of Hilton Hill; this dating from between 1998 and 2008.

11.3.1.1 Prehistoric Settlement

38. The NMRS and PKHT HER record three sites that could be of prehistoric date: a cairnfield (3), cultivation terraces (4) and possible Bronze Age burial cairn (5). Although they are included here as potentially prehistoric features, the cairns (3) and the terracing (4) could equally well be medieval in date. The cairn (5) is, however, likely to be a prehistoric feature.

39. The cairnfield (3) is described as consisting of four cairns of up to 3m in diameter. Vegetation conditions in the area at the time of the field survey made it difficult to identify these features and the number, size and locations of individual cairns could not be confirmed. The cairnfield (3) is of some archaeological and historic environment value and is considered to be of **low value / sensitivity**.

40. The cultivation terraces (4) are recorded as having been detected on the west-facing slope of Balduff Hill. The HER provides a grid reference that lies outwith the Development Area (within what is now a mature coniferous forestry plantation), but the accompanying GIS data demarcates an area that extends within the Development Area. Vegetation conditions in the area made it difficult to establish the presence or otherwise of any terracing and it cannot be confirmed whether or not the terracing (if it is an artificial, anthropogenic feature) does in fact extend beyond the present forestry and into the Development Area. The cultivation terraces (4), of which there appears to be no surviving evidence, are considered to be of **negligible value / sensitivity**.

41. A much reduced and robbed out cairn (5), surviving near the summit of Hilton Hill, may be of prehistoric origin and is most likely the remains of a Bronze Age burial monument. As such, the cairn has some archaeological potential and historic environment value; however, given its denuded and disturbed condition, it is considered to be of **low value / sensitivity**.

11.3.1.2 Medieval and Later Remains

42. Two mills (2) are shown on Stobie's map of 1783 (Ref. 11-11) at the head of Alyth Burn. One, annotated as 'mill', lies to the north of the public road, and the other annotated 'Tullimurdoch' (not depicted on **Figure 11.1**), to the south of the public road and outwith the Development Area. Both appear to have gone out of use prior to the mid-19th century as neither is depicted on the Ordnance Survey 1st Edition map (1867, Ref. 11-12). The northernmost mill and its associated mill race are of some archaeological and historic environment value and considered to be of **low value / sensitivity**.

43. The remains of a rectangular drystone building (13) and an associated clearance cairn lie at the edge of forestry plantation in the south-west corner of the Development Area, immediately adjacent to a trackway (7). The building is not shown on any historic maps and may date to the pre-improvement period. The building has some archaeological potential and historic environment value and is considered to be of **low value / sensitivity**.

44. Five small, square, roofed buildings (9), of unknown function, are depicted on the Ordnance Survey 2nd Edition (1902) map (Ref. 11-13). The buildings are not shown on the earlier Ordnance Survey 1st Edition (1867) map (Ref. 11-14) nor are they depicted on subsequent maps. This would suggest that the structures are of late 19th century date, and were occupied or used for a relatively short period. No surface remains were identified during the field survey, but a natural spring (18), which appears to have been deliberately modified to create a small pool or well, was found close by that may have been used during their occupation. The buildings and the spring / well (18), are of little archaeological or historic environment value and are of **negligible value / sensitivity**.

45. A large oval enclosure (10), on the south side of and enclosing the summit of Hilton Hill, is visible on vertical aerial photographs dating to 1968 (Ref. 11-14). The enclosure is not mapped until its depiction on the Ordnance Survey 1977 map (Ref. 11-15). Linear banks (11.1, 11.2) are shown on the 2007 Ordnance Survey map (Ref. 11-16) extending northwards and westwards from the northern side of the enclosure. Field survey found the enclosure to consist of a substantial turf bank, with an associated ditch running intermittently along its length. The south-western side of the enclosure appears to have been truncated by a later trackway (8). The date of the enclosure is unknown; although its form and character would suggest an early (possibly 18th or 19th century) date. The fact that it does not appear on early maps is surprising given its scale (up to 1m high in places), although the area is shown to be heavily wooded until the late 19th century and it may not have been visible to record at that time. The enclosure and associated banks may be pre-improvement agricultural features and are considered to have some historic environment value and to be of **low value / sensitivity**.

46. The remains of a possible small, sub-circular enclosure (15) were identified during the field survey, in an area of rough pasture next to an old watercourse and to the north of the remains of an old field bank (14). The enclosure, which may be an old sheepfold, is poorly preserved and is defined by a low turf and stone bank forming its south-western side. The feature is not depicted on the Ordnance Survey 1st Edition (1867) map (Ref. 11-17) or on any later maps. The enclosure may be of pre-improvement date but has limited historic environment value. The enclosure is of **negligible value / sensitivity**.

Field systems: Field Boundaries / Rig and Furrow Cultivation / Clearance Cairns

47. The truncated remains of a small field system / enclosure bank (17), defined by low turf and stone banks was identified during the field survey in an area of rough pasture along the southern edge of the Development Area. The remains have been cut, in the north-west corner, by a modern farm track and the banks do not continue into the ploughed fields to the south, nor do they coincide with the boundaries of the later fields. The arrangement of the banks does not correspond to the field pattern shown on the Ordnance Survey 1st Edition (1867) map (Ref. 11-17) and is probably that they are the remnants of an earlier field system, perhaps associated with Kinkeady Farm, which lies a short distance to the south. To the west of the enclosure banks there is a large irregular pile of bare stone derived from field clearance (16), which was probably associated with the same field system. The field remains and the clearance cairn have limited historic environment value and are considered to be of **negligible value / sensitivity**.

48. An isolated and fragmented length of field bank (14) was identified during the field survey, to the south of the possible enclosure (15) described above. The bank has been truncated at its southern end by a modern farm track and by forestry. The bank does not correspond to any current field boundaries; most of which are post and wire fences; directly replacing earlier dry-stone walls which demarcate the field systems depicted on the Ordnance Survey 1st Edition (1867) map (Ref. 11-17). Like the banks described above (17), this bank is likely to be a remnant of an earlier field system, possibly associated with Kinkeady Farm. The remains have little historic environment value and are considered to be of **negligible value / sensitivity**.

49. A T-shaped section of dry-stone wall (23) is depicted on the 2007 Ordnance Survey map (Ref. 11-18) and survives within an area of what is now rough pasture at the south-eastern end of the Development Area. Field survey found that the field wall extends further south than is depicted on the 2007 map, forming part of a field boundary which continues to the south, outwith the Development area. The remains of the wall define the northern end of an area of rig and furrow cultivation (22) and an old clearance cairn (24) lies close to the wall. The remnant of this former cultivated field is of limited historic environment value and is considered to be of **negligible value / sensitivity**.

50. A small, isolated bare stone clearance cairn (19) lies in rough pasture immediately to the west of an area of recent conifer forestry planting. The cairn has little historic environment value and is considered to be of **negligible value / sensitivity**.

Trackways

51. Four trackways (6, 7, 8 and 20) were identified from examination of historical maps and aerial photographs, and the continuing survival of some was recorded by field survey. Two interconnecting curvilinear trackways (6), on the southern slopes of Balduff Hill, are depicted on the Ordnance Survey 1st Edition (1867) map (Ref. 11-17) but are not shown on subsequent maps, suggesting that they went out of use during the late 19th century. These tracks partially survive as intermittent short lengths of unused grassy or heather-covered hollow-ways; a short section continues in use as a modern farm track. A second trackway (7) is depicted on the Ordnance Survey 1st Edition (1867) map (Ref. 11-17) running northwards from the public road towards Craighead. This track has a metalled surface and remains in use as a farm and forestry access track. Trackway (8) was identified during the field survey running along the lower southern slopes of Hilton Hill. It is best preserved at its southern end, where it appears as a well defined hollow-way, which truncates an earlier enclosure bank (10). The trackway is aligned with a field gate in the southern boundary wall and corresponds to a grassy strip running along the side of the field extending to the south; it is likely to be relatively modern and continues to be used. Trackway (20), aligned roughly west to east from the same field gate as (8), survives as a slight grassy hollow for most of its length and is still in use as a farm and forestry track. All of the trackways are considered to be of little archaeological or historic environment value and are of **negligible value / sensitivity**.

11.3.1.3 Other Features

52. A bridge (1) is shown on maps, from the Ordnance Survey 1st Edition (1867) map (Ref. 11-17) onwards, crossing the Alyth Burn. The single-arch bridge lies just outside the Development Area and is still in use as a road bridge. The bridge has historic environment value and is considered to be of **low value / sensitivity**.
53. A quarry (12), depicted on the Ordnance Survey 2nd Edition (1902) map (Ref. 11-19) and adjacent to the public road is likely to have been related to road building or maintenance. The quarry is considered to be of little archaeological or historic environment value and of **negligible value / sensitivity**.
54. A weathered and partially buried stone (21) (possibly inscribed with the letters 'SUVR') was found during the field survey, at the base of a field gate post. The stone may be a property boundary marker and, although of some historic environment value, is considered to be of **negligible value / sensitivity**.
55. A small cairn (25), 2.5m in diameter, 0.5m high and mostly turf-covered, was identified during the field survey near the summit on the south-western slope of Balduff Hill. The cairn, which occupies a prominent topographical position, is likely to have been a shepherd's cairn or marker cairn. It may have some limited archaeological or historic environment value and is considered to be of **low value / sensitivity**.

11.3.2 Historic Landscape Character and Assessment of Archaeological Potential

The Development is situated on land around 5km north-west of Alyth, to the north of Little Bamff and Kinkeadly Farms, and the Development Area encompasses the summits of Balduff Hill and Hilton Hill. The Development Area ranges in altitude from approximately 250m Above Ordnance Datum (AOD) near Kinkeadly to 430m at the summit of Balduff Hill.

56. The presence of a small cairnfield, along with possible cultivation terraces noted immediately to the north of the Development Area, and a probable prehistoric burial cairn (on Hilton Hill), suggests that there is some potential for prehistoric activity or settlement in the area, although the cairnfield and terraces could alternatively and equally well have their origins in the later, medieval period.

57. Evidence of medieval or later land-use is present along the southern edges of the Development Area within what is now grassy rough pasture. The remains include: enclosures, relict broad rig, field banks and clearance cairns. Some of these field system elements correspond to those present today, but the most are neither aligned with nor associated with modern field boundaries and appear to be remains of earlier field systems. Evidence from historic maps suggests that, in the mid-19th century, the Development Area was covered by mixed woodland. This seems gradually to have been cleared during the late 19th century and the early part of the 20th century.

58. In the wider landscape, within 5km of the development area, there are records of substantial cultivation terracing on hill slopes to the south-west of the Development Area, at Tullymurdoch (HER ref. no. MPK5071). Outwith, but close to, the Development Area, hut-circles representing prehistoric settlement, have been recorded to the north of Tullymurdoch, and to the south of Craighead Hill (e.g. HER ref no MPK5090, MPK4112 and MPK4113). To the south-west of Tullymurdoch there are two stone circles at Parkneuk (HER ref. no. MPK4141; Scheduled Monument Index No 1505) and a robbed out burial cairn has been recorded at Happy Hillock (HER ref no MPK4099). The nearby category B listed Bamff House (HB No. 4368), to the south of the Development Area, has elements that date to the 16th century, and potentially earlier remains, in the form of a moat nearby, which suggests the likelihood of settled land-use dating to at least the late-medieval period.

59. The present landscape retains something of a historical dimension to it and contains limited relict remains of a multi-period landscape, which has, in places, been relatively undisturbed by current land-use practices; although, as noted above, the area was heavily wooded in the 19th century. This and the presence of large tracts of newly planted trees within the Development Area, suggests that the survival of any hitherto unknown, buried features in those areas will be somewhat compromised.

60. Taking into consideration the evidence for prehistoric activity within the Development Area and nearby, and for the later exploitation of the area from the medieval/post-medieval period, it is considered that the Development Area has some limited archaeological potential. Much of the Development Area lies above 300m AOD and the archaeological potential on this high ground is considered to be lower than that of the low ground north of Kinkeadly (and where evidence for agricultural activity is focused). There is a higher, but localised, archaeological potential in the immediate vicinity of the presumed Bronze Age burial cairn (5) and in the vicinity of the cairnfield (3).

61. The historic and current land use of the area is not especially sympathetic to the preservation of as yet undetected buried remains of prehistoric and later sites; particularly in those areas that have been recently planted with new coniferous forestry. Taking into account the layout of the Development and the limited land-take required for construction, the probability of encountering hitherto undiscovered sites of archaeological importance during the course of construction work is considered to be low.

11.3.3 The 'Do Nothing' Scenario

62. If the Development was not to proceed there would likely be little or no change to the baseline condition of the various cultural heritage features within the Development Area. Recent planting appears to have followed current forestry guidelines (Ref.11-20) regarding the preservation of known cultural heritage features, such as the burial cairn (5), enclosure (10) and field banks (11)), which are not within areas of planting,

suggesting that any future forestry planting would also follow forestry guidelines. There would be no change to the setting of external cultural heritage receptors.

11.4 The Development Layout Considerations

63. The results of the desk-based study and reconnaissance field survey were digitised and provided as GIS data shapefiles. Identified features were recorded as either point locations (given for small individual features such as the small cairns (e.g. 5 and 25) and enclosures (15)); linear representation (for trackways and field boundaries (e.g. 6, 8, 20)); and areas (where a number of related features form integrated sites, such as the cairnfield (3) and the remnant field systems (22)).
64. Appropriate buffer zones, to prevent direct effects on known sites or features arising during the design stage, were applied to features taking account of the type of feature, its relative importance, and the potential for buried remains to survive close by. These included a 50m radius buffer around the possible burial cairn (5), to allow for the possibility of satellite burials, and 20m buffers around other, less archaeologically important, sites or features (3, 4 and 25).
65. The proposed main access route from the substation and construction compound to turbine 1 has been designed to avoid the recorded extent of a cairnfield (3). The track layout has been designed to minimise the number of points at which the enclosures bank (10) and field banks (11) are crossed. The turbine layout has also been designed to avoid particularly sensitive sites and locations (3-5, 9, 22-24).

11.4.1 Assessment of Effects

66. The assessment of effects is based upon the development description outlined in **Chapter 4: Development Description** and is structured as follows:
- direct construction effects on all cultural heritage assets, either designated or non-designated, within the Development Area;
 - indirect operational effects, affecting the settings of designated cultural heritage sites including Scheduled Monuments; Listed Buildings; Conservation Areas and Gardens and Designed Landscapes (GDL);
 - cumulative indirect effects on cultural heritage assets, of the Development in combination with other existing or proposed schemes.

11.5 Construction Effects of the Development

11.5.1 Predicted Effects

67. Using the criteria detailed in **Tables 11.1 and 11.2, Appendix 11.1** summarises the predicted direct effects on the features identified by the study within the Development Area.
68. Direct effects are predicted on the following sites: trackways (6); an enclosure (10) and associated banks (11.1 and 11.2); a bank (14); and, a small enclosure (15). These effects are discussed in more detail below. The main access route into the development uses another trackway (7). However, that trackway is surfaced and used as a forestry and farm access. No further mitigation is therefore required for the trackway (7).
- The proposed access tracks for turbines 4, 5 and 6 cross the alignment of former trackways (6) in four places. The trackways are considered to be of negligible sensitivity and there are only a few surviving sections now visible. In all cases, intersections with the trackways will be minimal. The trackways are of negligible value /

sensitivity and the predicted direct effect on the trackways is considered to be of imperceptible magnitude, resulting in an effect of negligible significance.

- The routes of the proposed access tracks to turbines 6 and 7 cross the bank defining an enclosure (10) in two places. A very small portion of the eastern end of one borrow pit and the southern end of another borrow pit also cross the bank defining the enclosure (10). The proposed access track network also crosses associated banks (11.1 and 11.2), and the proposed crane hardstanding for turbine 3 overlies the northern end of one of these (11.1). The enclosure and banks are considered to be of low sensitivity and are preserved as relatively substantial turf banks with intermittent ditches running along their lengths. In all cases only small sections of the banks will be affected. The enclosure and banks are of low value / sensitivity and the predicted direct effect of low magnitude results in an effect of negligible significance.
- The proposed substation overlies the northern half of a turf bank (14) and the remnants of a small enclosure (15). Both the bank and enclosure are considered to be of negligible value / sensitivity and both are poorly preserved. The predicted direct effects on the bank and enclosure are considered to be of high magnitude and of minor significance.
- Possible direct effect on any hitherto undiscovered buried archaeological remains arising from construction. The probability of such discoveries is considered to be low, with a higher, but localized, probability in the immediate vicinity of the presumed Bronze Age burial cairn (5) and in the vicinity of the cairnfield (3). Both sites are considered to be of low value / sensitivity and any buried remains nearby are likely to be of similar value / sensitivity. The predicted direct effects would be of high impact and of moderate significance.

11.5.2 Proposed Mitigation

69. The emphasis in Scottish Government Planning Advice Note (PAN) 2/2011: Planning and Archaeology) is the 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 and offer various options for recording and ensuring that, where practical, upstanding sites and features are preserved intact to retain the present historic elements of the landscape.
70. All mitigation works presented in the following paragraphs will take place prior to, or during, the construction of the Development. All works will be conducted by a professional archaeological organisation, and the scope of works will be detailed in a Written Scheme of Investigation (WSI). The WSI will make provision for appropriate post-excavation analysis and dissemination of the results of the mitigation works, as well as for archiving of the project materials and records. The WSI will be subject to the approval of PKHT.

11.5.2.1 Preservation in situ

71. In accordance with the requirements of planning policy, where heritage features lie in close proximity to one or more construction elements of the Development, they will be avoided to ensure their preservation in situ. Where appropriate, heritage features will be either entirely fenced-off or visibly marked-out to prevent accidental damage occurring to the remains during construction activities in the vicinity.
72. Sites to be marked off are:

- A cairnfield (3), which lies in close proximity to the proposed main access route from the substation and construction compound to turbine 1, will be avoided by the construction of the access track. Its extent, facing the working area, will be marked out to signal its presence to avoid accidental damage from vehicle movement. The markers will be placed a minimum of 10m from the nearest cairn to the access track.

11.5.2.2 Evaluation by Trial Trenching / Watching Brief

73. The scope of any evaluation trial trenching or watching brief will be agreed in advance of the construction of the Development with PKHT. The details will be set out in the WSI. A small number of heritage features will be directly affected by construction works and to ensure their proper recording, evaluation trenches will be excavated across the affected features prior to construction work in those areas. In all cases, the purpose of the evaluation trenches will be to provide information pertaining to the construction and function of the features identified, as well as to recover, if possible, dating evidence for their construction and/or use. Details are provided below:

- at the locations where an enclosure (10) and associated banks (11.1 and 11.2) are crossed by the proposed turbine access routes, and where the enclosure (10) is crossed by the ends of two borrow pits;
- at the location where a bank (14) is overlain by the proposed substation;
- across a small enclosure (15) that is overlain by the proposed substation.

74. A watching brief will be carried out where track construction passes the recorded cairnfield (3) and during topsoil stripping for the construction of turbine 7 and opening of a borrow pit, close to where a probable Bronze Age burial cairn (5) has been identified.

11.5.2.3 Post Excavation

75. If significant discoveries are made during archaeological monitoring and preservation in situ of any sites or features is not possible, provision will be made for the excavation, where necessary, of any archaeological remains encountered. This provision will include the consequent production of written reports on the findings, with post-excavation analyses and publications of the results of the works, as appropriate.

11.5.2.4 Construction Guidelines

76. Written Guidelines will be issued for use by all construction contractors, outlining the need to avoid causing unnecessary damage to known sites. That document will contain arrangements for calling upon retained professional support in the event that buried archaeological remains of potential archaeological interest (such as building remains, human remains, artefacts, etc.) should be discovered in areas not subject to archaeological monitoring. The guidance will make clear the legal responsibilities placed upon those who disturb artefacts or human remains.

11.5.3 Residual Effects

77. The completion of a programme of archaeological mitigation works as set out above will minimise the loss of the archaeological resource that would occur as a result of the construction of the Development. Taking the mitigation into account, no significant residual effects are anticipated in relation to direct effects on cultural heritage features within the Development Area.

11.6 Operational Effects of the Development

11.6.1 Predicted Effects

78. Lists of external receptors up to 10km from the Development and predicted by the blade tip ZTV to have theoretical views of one or more turbines are provided in **Appendices 11.2 and 11.3**, and their locations are shown on **Figure 11.2**. The appendices provide a summary assessment of the predicted effects on the settings of the receptors on a site-by-site basis.

79. The assessment of magnitude of effect has been based on the analysis of the blade tip height ZTV, taking into account the distance of the assessed receptor from the Development, the number of blade tips visible and the present baseline setting of each site. The ZTV model is, however, a coarse 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. Therefore, professional judgment has been used to assess the significance of effects informed by ZTV and site visits. Where Historic Scotland requested visualisations these have been used to further assess predicted effects on setting. The visualisations are presented in **Figures 11.3 to 11.9**.

80. The assessment radius of 10km was agreed by Historic Scotland, PKHT and ACAS to be acceptable (**Table 11.1**).

81. Scheduled Monuments, Category A and B Listed Buildings, Conservation Areas, Inventory status Gardens / Designed Landscapes, and Inventory status Historic Battlefields within 10km of the Development are all considered; assessment of effects on Category C(S) Listed Buildings is restricted to those within 5km of the Development as these are all generally minor vernacular building types of the local historic environment, with localised settings.

82. Analysis of the ZTV indicates that there will be theoretical visibility of the turbines from 47 Scheduled Monuments (one of which is also category B listed), two Category A Listed Buildings, 39 Category B Listed Buildings, five Category C(S) Listed Buildings (within 5km), and two Inventory status Gardens/ Designed Landscapes. Sites requested by Historic Scotland to be specifically assessed (**Table 11.1**) and those that are judged to have the most sensitive settings have been assessed using wireframe visualisations and photomontages (**Figures 11.3 to 11.9**). Only the sites identified by Historic Scotland, and those sites for which a significant effect upon their setting has been predicted, are discussed in detail below.

83. All sites predicted by the blade tip ZTV to have theoretical intervisibility with the Development and whose settings could be affected are assessed in tabulated form in **Appendix 11.2 and 11.3**

84. Thirteen cultural heritage receptors have been identified by Historic Scotland as requiring assessment on their settings. Of these, three have no theoretical visibility with the proposed development and are no longer considered in the assessment. These sites are: Redlatches, settlement and field system 1700m S of (4673); Glenballoch Cottage, standing stone E of (1549), and Craighall stone circle NE of Sawmill of Craighall (1525).

85. Effects of moderate significance are predicted on the settings of Parkneuk Stone Circles (1505), Barry Hill fort (1591), and Bamff House (4368). No other significant effects have been predicted on the setting of cultural heritage receptors in the wider landscape.

11.6.1.1 Kilry, Standing Stone 100m NNE of Kilry School (124) (TBC)

86. Kilry Standing Stone is a Scheduled Monument located on low lying ground in woodland in the grounds of Kilry School, on the west side of the River Isla and surrounded by arable farmland. The stone's current surroundings do little to enhance the setting of the standing stone, which is therefore considered to be of low sensitivity. A combination of intervening

rising topography and the surrounding woodland screen the site from any views of the Development.

87. One turbine tip would theoretically be visible from the standing stone and views in other directions, were they to be obtained, would be unaffected. The site is entirely screened and, taking this into account, the Development will have an effect of imperceptible magnitude and negligible significance on the setting of Kilry Standing Stone.

11.6.1.2 Parkneuk Stones Circles, 550m E of (1505) (Figure 11.3)

88. Parkneuk stone circles is a Scheduled Monument consisting of two stone circles, situated in enclosed land on a flat knoll above Alyth Burn, within a surrounding landscape of arable fields. The southerly circle is located within a small woodland plantation which partially screens views outwards. The northern feature, a four post stone setting, is in an open location, with good views to the higher ground to the north and north-east, whilst views towards the south-west are constrained by the topography of the hill. The photomontage (Figure 11.3) shows the view through the stone setting aligned on Balduff Hill (around 54°); however, the actual orientation of the stone setting may be more north-easterly (40° - 45°) and appears to align on either the summit of Craiglea Hill or, more likely, Criegh Hill and on Cairn Plew (6842). The setting of the stone circles is considered to be of medium sensitivity.

89. Based on the ZTV, all seven of the proposed turbines would theoretically be visible from the stone circles, 2km away; this is confirmed by the photomontage (Figure 11.3). The Development lies in a prominent location in the main view through the stone setting (but not necessarily directly along any significant alignment) and will form a new and noticeable element in the landscape to the north-east partially altering the setting; although views in other directions would be unaffected and the landscape context and the site's relationship with other monuments in the vicinity would remain legible. Taking this into account, it is considered that the Development will have an effect of low to medium magnitude and moderate significance on the setting of Parkneuk stone circles.

11.6.1.3 East Drimmie, stone circle 650m ENE of (1537) (Figure 11.4)

90. East Drimmie stone circle is a Scheduled Monument represented by seven fallen stone slabs forming an arc, originally part of a circle 6m-7m in diameter, and one additional stone slightly off line. The monument is located in rough pasture in a clearing on the south-west edge of a modern forestry plantation. The setting of the stone circle is considered to be of low sensitivity due to the presence of the forestry in the immediate environs of the monument.

91. All seven of the proposed turbines would theoretically be visible from the stone circle (Figure 11.4); however, this visibility is screened by the modern forestry plantation to the north, east and south of the monument. If the forestry screening were not present, the Development would be visible in a narrow arc of view (15°) against the skyline, 3.7km to the north-east of the monument; views in other directions would be unaffected and the landscape context and the site's relationship with other monuments in the vicinity would remain legible.

92. Taking this into account, together with the low sensitivity of the setting of the stone circle, it is considered that the Development will have an effect of imperceptible magnitude and negligible significance on the setting of East Drimmie Stone Circle. Were the forestry to be removed during the operation of the Development, the Development would have an effect of no more than low magnitude and minor significance on the setting of the stone circle.

11.6.1.4 Barry Hill fort (1591) (Figure 11.5)

93. Barry Hill fort is a Scheduled Monument and the well preserved remains comprise an extensive vitrified stone wall measuring 10m wide by 7m high and enclosing an area measuring 80m by 25m, with substantial outer earthworks also visible. The fort is located on the summit of Barry Hill with commanding views of the surrounding farmland, particularly

along Glen Isla to the north and north-west. The fort is visually prominent in the landscape and its setting is considered to be of high sensitivity.

94. All seven proposed turbines would be visible from the monument (Figure 11.5), and, although these views would be distant, at approximately 4.5km away, the topographical location of the hill fort, allowing the fort to command clear views up Glen Isla and the surrounding landscape, mean that the Development will form a new and slightly intrusive element to the view in this direction from the fort (Figure 11.5); although views in other directions would be unaffected and the fort's landscape context and its relationship with other monuments in the vicinity would remain legible. It is considered that the Development will have an effect of low to medium magnitude and moderate significance on the setting of Barry Hill fort.

11.6.1.5 Easter Cammock, settlements, field systems and cairn 650m SW of (4586)

95. Easter Cammock is a Scheduled Monument comprising the remains of 13 Late Bronze Age to Iron Age circular stone-walled houses; a burial cairn, and associated field systems. The monument also includes four pre-improvement longhouses with associated field systems. The site is located in upland moorland on an east-facing slope of Broom Hill. Modern forestry plantation lies to the west, and there has been recent felling of the forestry to the south. The setting of the monument is considered to be of high sensitivity but localised to the Isla river valley.

96. There are good views along the Glen Isla river valley to the south-east; however, only two of the proposed turbines (4.8km away) will theoretically be visible from the monument, and such views are partial (restricted to the hubs and blade tips) and distant. The setting gives prominence to more localised views along the Glen and the original setting has already been compromised by the extensive forestry plantation to the west and south, also affecting visual appreciation of how the monuments may have related to similar sites in the surrounding area.

97. It is considered that the Development will have an effect of imperceptible magnitude and negligible significance on the setting of Easter Cammock settlement.

11.6.1.6 Redlatches, settlement and field system 1900m SSE of (4640) (Figure 11.6)

98. Redlatches is a Scheduled Monument comprising the remains of six, Late Bronze Age to Iron Age circular stone-walled houses, with associated field systems. The site is located on the south-facing slopes of Druim Dearg in upland moorland between two areas of modern forestry plantation, which restricts views from the monument to the east and west detracting somewhat from the original setting of the monument, which is localised to the valley of Kilry Burn. The setting of the monument is considered to be of high but localised sensitivity.

99. There are good views to the south and south-east from the monument, and although restricted by the local topography, both Balduff and Ardormie Hill are prominent as distant visual elements to those views. Two of the proposed turbines would theoretically be visible from the monument. The wireframe (Figure 11.6) shows that one proposed turbine would feature relatively clearly in the main view south-eastwards from the monument, although in a distant view (4km). The site's landscape context and its relationship with other monuments in the vicinity would remain legible.

100. It is considered that the Development will have an effect of low magnitude and minor significance on the setting of Redlatches settlement.

11.6.1.7 Middleton Muir, settlements, field systems, cairns and deer dyke (5396) (Figure 11.7)

101. Middleton Muir is a Scheduled Monument comprising the remains of at least 30 Bronze Age roundhouses, with associated field systems, and at least five burial cairns, all located in upland moorland on the south-western edges of the Glen Ericht river valley. The monument is one of the most extensive assemblages of prehistoric remains in north-east Perthshire. The Scheduled area also includes remains of Buzzart Dyke, a medieval deer dyke. The setting of the monument is considered to be of high sensitivity.
102. All seven of the proposed turbines would theoretically be visible from the monument in views to the north-east; however, they would be over 9km away and there would be some screening from local topography and modern forestry plantation in the intervening landscape. Views in other directions from the monument would be unaffected by the Development.
103. It is considered that the Development will have an effect of imperceptible magnitude and negligible significance on the setting of Middleton Muir settlement.

11.6.1.8 Cairn Motherie, cairn, Creigh Hill (6343) (Figure 11.8)

104. Cairn Motherie cairn is a Scheduled Monument located in a prominent location on a summit of the north-east end of Creigh Hill, in upland moorland. There are good views of the surrounding landscape and intervisibility with Cairn Plew (6842), 1km to the south-west. There are several other cairns in the wider landscape, at lower elevations along Melgam Water and the Inzion Burn (6344, 6844, 6846, and 8503) that are likely to be of similar date. The setting of the cairn is considered to be of high sensitivity.
105. The blade tips of one of the proposed turbines would theoretically be visible from Cairn Motherie (Figure 11.8); however, this restricted and partial view would be at 7.7km distance (Figure 11.8) and views in other directions from the cairn would be unaffected. The intervisibility between Cairn Motherie and Cairn Plew (6842) to the south-west will not be significantly affected by the introduction of the Development and views of the cairn in its hill top location would be unaffected.
106. It is considered that the Development would have an effect of imperceptible magnitude and negligible significance on the setting of Cairn Motherie.

11.6.1.9 Cairn Plew, cairn 1350m NW of Wester Coul (6842) (Figure 11.9)

107. Cairn Plew cairn is a Scheduled Monument located in a prominent location on the summit at the south-west end of Creigh Hill, in upland moorland. There are good views of the surrounding landscape and intervisibility with Cairn Motherie (6343), 1km to the north-east. There are several other cairns in the wider landscape at lower elevations along Melgam Water and the Inzion Burn (6344, 6844, 6846, and 8503) that are likely to be of similar date. The setting of the cairn is considered to be of high sensitivity.
108. All seven of the proposed turbines would be visible from Cairn Plew (Figure 11.9), forming a new visual element in one of the main views from the monument overlooking the river valleys of Melgam Water and the River Isla. However, the views of the turbines would be distant, at 6.6km away, and some of the intervening landscape at least is covered with modern forestry plantation. The intervisibility of Cairn Plew and Cairn Motherie, one of the main contributions to the high sensitivity of the setting of Cairn Plew, would not be affected. Furthermore, views in other directions from the cairn and views of the cairn in its hill top location would be unaffected.
109. It is considered that the Development would have an effect of low magnitude and minor significance on the setting of Cairn Plew.

11.6.1.10 Craighall Rattray Garden and Designed Landscape

110. Craighall Rattray is an Inventory status Garden and Designed Landscape (GDL), 6km to the southwest of the Development. The GDL provides the setting for Category B Listed Craighall Rattray Mansion, a mid-19th century baronial mansion. The policies cover 71ha and include

ancient woodland and parkland along the Glen Ericht Gorge. The principal setting of the GDL is the gorge along the River Ericht. The mansion itself can be partially seen from the west side of the policies, near the A93 public road, but views of the Development behind the mansion would be restricted through local topography and modern forestry plantation. The setting of the GDL is considered to be of high, but localised sensitivity.

111. Two of the proposed turbines would theoretically be visible from restricted parts in the north end of the GDL. Any views would be distant, but the Development is likely to be screened from views by the surrounding woodland and local topography. From most of the GDL there would be no view of the Development.
112. It is considered that the Development would have an effect of imperceptible magnitude and negligible significance on the setting of Craighall Rattray GDL.

11.6.1.11 Bamff House (4368)

113. Bamff House is a Category B Listed building comprising a 16th century tower house with 19th century additions and alterations, 1.5km to the south of the Development. The house is set within grounds of mixed woodland and arable/improved pasture farmland, which provide the setting for the house and associated ancillary structures; these include a sundial (4369), an icehouse (4370); and the South Lodge (4367). The House and grounds are located within arable/improved pasture farmland to the south of the Development. The setting of Bamff House is considered to be of medium sensitivity, but localised to the immediate environs of the surrounding grounds.
114. All seven turbines would be visible from the house, 1.2km away on the northern skyline. Most of the views from the house and from within the grounds would be at least partly screened by the woodland immediately to the north of the house and bordering the grounds to the west, south and east. The main approach to the house is from the south-east, a view that is largely screened by woodland until the house itself is reached, where views of both the house and the Development to the north may be possible. Views of the house with the development behind are also likely from within other parts of the grounds, particularly views from south-east of the house.
115. Taking into account the proximity to the Development, the number of proposed turbines visible, and the visibility of the house and the development from within the grounds, it is considered that the Development would have an effect of medium magnitude and moderate significance on the setting of Bamff House.

11.6.2 Proposed Mitigation

116. No further mitigation would reduce or offset the predicted operational effects.

11.6.3 Residual Effects

117. During its operational lifetime, the residual effects of the Development on the settings of the various sites and monuments within the 10km study area will be as identified above. Effects of moderate significance are predicted on the settings of Parkneuk stone circles (1505), Barry Hill fort (1591), and Bamff House (4368).

Cumulative Effects Assessment

118. The cumulative windfarm location plan (Chapter 6: Landscape and Visual Amenity, Figure 6.24) shows the distribution of other wind energy developments up to 35km from the Development. Many of these are small scale developments (one to three turbines) and are more than 15km from the Development. It is considered unlikely that there will be potential for significant cumulative effects on the settings of important cultural heritage assets from the Development in combination with these schemes. Those other windfarm

developments with which cumulative effects are considered most likely to occur are: Drumderg (operational); Welton of Creuchies and East Gormack (consented); Carrach (application submitted); Ardlebank (application submitted); and, Tullymurdoch (design/scoping).

11.6.4 Predicted Cumulative Effects

119. Tullymurdoch is 1.5km north-west of the Development and the main areas of overlap in the visual envelopes are from the south-west to the north-east of the Development study area, between Middleton, to the north of Blairgowrie, and Mile Hill, north-west of Kirriemuir (**Figure 6.25**). There will be theoretical joint visibility of the Development and Tullymurdoch from Parkneuk stone circles (1505), where the arc of view from the north-east to the north of the site will contain views of both windfarms. Combined with the view of the existing Drumderg windfarm in this same arc of view, the cumulative effect on the setting of Parkneuk Stone Circles would be of moderate significance.
120. There will be theoretical joint visibility of the Development and Tullymurdoch from East Drimmie stone circle (1537), but it is considered that neither development will have a significant impact upon the setting of the monument given that the majority of the site is surrounded by forestry plantation, screening views towards both proposals.
121. There will be theoretical joint visibility of the Development and Tullymurdoch from Barry Hill fort (1591), although this is not considered to be significant as the combined increase in turbines visible would in the same direction of view from the fort, to the north-west, and at some distance.
122. There will be theoretical joint visibility of the Development and Tullymurdoch from Middleton Muir (5396) settlement, although this is considered to not be significant as the joint theoretical visibility would extend over a small area site and both proposals would be in distant views.
123. There would be theoretical joint visibility from both Cairn Motherie (6343) and Cairn Plew (6842) although neither development is likely to have a significant impact upon the setting of either cairn, and cumulatively the effect on their settings will be of minor or negligible significance.
124. Welton of Creuchies is 3km to the south-west of the Development, and has been combined with East Gormack (8.5km to the south-west of the Development) in the paired CZTV (**Figure 6.26**). The main areas of overlap in the visual envelopes are in the north-west to the south-east of the study area, between Bridge of Cally, off the A924, and Craigton, off the A926 (**Figure 6.26**).
125. There will be theoretical joint visibility of the Development and Welton of Creuchies/East Gormack from East Drimmie Stone Circle (1537), although this is not considered significant as only the single turbine of East Gormack will be visible due to the forestry surrounding the Stone Circle.
126. There will be theoretical visibility of the Development and Welton of Creuchie/East Gormack from Middleton Muir settlement (5396). Although the windfarms will be visible in a wide arc of view, from the south-south-east to the north-west, the three developments are widely spaced apart and would not all be seen in the same view. The cumulative effect is not considered to be significant.
127. There would be theoretical joint visibility from Cairn Plew (6842), although this is not considered to be significant as all three proposals would be seen in distant views only, and would all be seen in the same direction.
128. Carrach is 9km to the north-east of the Development, and the main areas of visual overlap are from the south-west to the north-east of the Development study area, from Rosemount to Balintore (**Figure 6.27**).

129. There will be joint theoretical visibility of the Development with Carrach from East Drimmie (1537), Barry Hill (1591), East Cammock (4586), Middleton Muir (5396) and Cairn Plew (6842). In all cases the cumulative effect is not considered to be significant as the monuments are located on edges of the theoretical envelopes and would mostly have distant views.
130. Ardlebank is 9km to the west-north-west of the Development and has minimal joint visibility with the Development.
131. East Drimmie (1537) has theoretical joint visibility of both proposals, but neither is considered to have an effect on the setting of the stone circle as it is screened by forestry in views in these directions.
132. Both Cairn Motherie (6343) and Cairn Plew have theoretical joint visibility of the two proposals but these monuments are located on the edge of the visual envelope and the two proposals would be seen only in distant views.

11.6.5 Proposed Mitigation

133. There is a predicted significant total cumulative effect of moderate significance, on the setting of Parkneuk stone circles (1505). There are no predicted significant total cumulative effects on the settings of any other cultural heritage assets, and no further mitigation would reduce or offset the predicted cumulative effects.

11.6.6 Residual Cumulative Effects

134. During its operational lifetime, the residual cumulative effect on the settings of the various sites and monuments within the 10km study area will be the same as the predicted cumulative effects.

11.7 Summary of Effects

135. **Table 11.10** below summarises the predicted effects of the Development on cultural heritage.

Table 11.10: Summary of Effects

Predicted Effects	Significance	Proposed Mitigation	Residual Effects
Construction			
Direct effect on route of former trackways (6) from track construction	Negligible	None	Negligible
Direct effect on enclosure (10) and field banks (11) from track construction	Negligible	Pre-construction evaluation trial trench at each crossing point.	Negligible
Direct effect on enclosure (15) and field banks (14) from track construction	Negligible	Pre-construction evaluation trial trench of each feature.	Negligible
Accidental damage to cairnfield (3) in proximity of working area from plant or other vehicle movements.	Moderate	Mark out prior to construction works commencing.	Negligible
Possible direct effect on buried archaeology in the vicinity of the cairnfield (3) and burial	Moderate	Archaeological monitoring (watching brief) in sensitive areas and follow up mitigation if	Minor

Predicted Effects	Significance	Proposed Mitigation	Residual Effects
cairn (5).		important new discoveries are made.	
Operation			
Indirect effect on setting of Parkneuk stone circles (1505)	Moderate	None	Moderate
Indirect effect on setting of Barry Hill fort (1591)	Moderate	None	Moderate
Indirect effect on setting of Bamff House (4368)	Moderate	None	Moderate
Indirect effects on the setting of other Scheduled Monuments, Listed Buildings, Gardens and Designed Landscapes,	Minor – Negligible	None	Minor – Negligible
Cumulative			
Indirect effect on the setting of Parkneuk stone circles (1505)	Moderate	None	Moderate
Indirect effects on the setting of other Scheduled Monuments, Listed Buildings, Gardens and Designed Landscapes	Negligible	None	Negligible

11.8 Statement of Significance

136. There are no predicted significant direct effects on any known sites or features within the Development site, but some possibility for direct effects on any hitherto undiscovered buried remains that might be present.
137. Following implementation of the mitigation measures set out there will be no residual significant negative direct effects.
138. There are predicted moderately significant effects on two Scheduled Monuments and one listed building for which no further mitigation is possible. A total cumulative effect of moderate significance is also predicted for one of the scheduled monuments: Parkneuk stone circles.

11.9 References

- Ref.11-1 Institute for Archaeologists (2010). 'By-Laws: Code of Conduct'. Institute for Archaeologists
- Ref.11-2 Institute for Archaeologists (2009). 'Standard and Guidance for archaeological desk-based assessment'. Institute for Archaeologists
- Ref.11-3 RCAHMS (2011). Pastmap [online]

- Ref.11-4 Coles, G.M., Gittings, B.M., Milburn, P. and Newton, A.J. (1998). Scottish Palaeoecological Archive Database [online], available from <http://www.geo.ed.ac.uk/spad/>
- Ref.11-5 RCAHMS (2011). Historic Land-Use Assessment for Scotland (HLAMap) [online], available from <http://www.rcahms.gov.uk>
- Ref.11-6 Royal Commission on the Ancient and Historical Monuments of Scotland Corporate Plan (2004-9), Survey and Recording Policy, p12 www.rcahms.gov.uk/survey
- Ref.11-7 Scottish Government (2011) Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011.
- Ref.11-8 International Council on Monuments and Sites (2005) Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas, adopted in Xi'an, China by the 15th General Assembly of ICOMOS (2005)
- Ref.11-9 Historic Scotland (2010). Managing Change in the Historic Environment – Setting
- Ref.11-10 Scottish Government (2011) Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011.
- Ref.11-11 Stobie, J. (1783). The Counties of Perth and Clackmannan
- Ref.11-12 Ordnance Survey (1902). Perthshire Sheet XLIII.SW and Forfarshire Sheet XXX & XXXVI, six inches to one mile
- Ref.11-13 Ordnance Survey (1867). Perthshire Sheet XLIII and XLII, six inches to one mile
- Ref.11-14 Aerial Photograph sortie 0568-038 (1968). Frames 086-090 1;7500
- Ref.11-15 Ordnance Survey (1977). Sheet NO25SW, 1:10,000
- Ref.11-16 Ordnance Survey (2007). Sheet NO25SW, 1:10,000
- Ref.11-17 Ordnance Survey (1867). Perthshire Sheet XLIII and XLII, six inches to one mile
- Ref.11-18 Ordnance Survey (2007). Sheet NO25SW, 1:10,000
- Ref.11-19 Ordnance Survey (1902). Perthshire Sheet XLIII.SW and Forfarshire Sheet XXX & XXXVI, six inches to one mile
- Ref.11-20 Forestry Commission (1995). Forestry and Archaeological Guidelines

11.9.1 Other sources

Maps

- Roy, W (1747-55) Military Survey of Scotland
Thomson, J (1827) Perthshire with Clackmannan

Aerial Photographs

Sortie CPE/UK/0304 (1947) frames 3040-3045, 1:10,000
Sortie CP541/A/047 (1949) frames 4124-4126, 1:10,200
Sortie 0568-038 (1968) frames 086-090, 1:7,500
Sortie 0571-409 (1971) frames 090-095, 071-077, 1:7,500
Sortie A55/504/88 (1988) frames 160-163, 1:24,000

Documents

RCAHMS (1975) The Royal Commission on the Ancient and Historical Monuments of Scotland. North-east Perth: An archaeological landscape, Held at RCAHMS A.1.7.PER, Held at RCAHMS A.1.1.INV/19

APPENDIX 11.1: Cultural Heritage Sites within the Development Area

Site no	Site name	Easting	Northing	NMRS no / SMR no	Source	Description	Sensitivity	Type of Effect	Magnitude of Effect	Significance of Effect
1	Tullymurdoch, bridge	32044	75221	NO25SW 11 / MPK5064	NMRS; HER; Historical maps; Field survey	<p>The NMRS and HER record a bridge crossing Alyth Burn at the south-western limit of the proposed Development Area. The bridge is depicted on maps from the Ordnance Survey 1st Edition (1867) onwards.</p> <p>Field survey records a single span arched bridge of quarried mortared sandstone. The bridge measures 12m in length by 6m in width by approximately 3m in height with 13 courses visible. More recent rendering/repair is evident with the inclusion of dressed red sandstone on the archway itself. The bridge is still in use as a road bridge.</p>	Low	None	n/a	n/a
2	Alyth Burn, former mills	32040	75200	NO25SW 32 / MPK5085	NMRS; HER; Historical maps; Field survey	<p>The NMRS and HER record that Stobie's map (1783) records two mills at the head of the Alyth Burn, one to the north of the road and one to the south, and records the name of the southern mill as 'Tullimurdoch'. The northern mill has no name and is simply annotated 'Mill'. RCAHMS survey (1988) identified the northern mill as depicted on Stobie's map. Remains of the mill were recorded in trees at the foot of a steep scarp; the building measuring 9.8m long by 5.9m wide with walls 0.7m thick and up to 1.3m high. The entrance to the mill was probably at the NNW end of its southwest wall. The lade is indistinct but the tail-race is well defined and, where best preserved, is up to 4.8m wide and 1.8m deep. The southern mill, as depicted on Stobie's map, could not be located; the site of the mill being obscured by dense vegetation.</p> <p>The mills are depicted on both Stobie's map (1783) and on Thomson's map (1827), where they are depicted as watermills. Neither mill is depicted on the Ordnance Survey 1st Edition map (1867) indicating that they had gone out of use by this date.</p> <p>Field survey recorded the remains of the northern mill as described in the NMRS. The mill foundations are best preserved on its eastern side and two courses of stonework are visible on the outer wall face on the northeast corner. Elsewhere, the walls are much tumbled, spread up to 2m wide in places. The mill race runs from the southeast corner of the building, where it is approximately 4m wide by 1.8m deep, narrowing to 2m and turning in an easterly direction towards the burn. A mound measuring 4m by 3m lies immediately adjacent to, and probably represents up cast from, the mill race excavation. The southern mill 'Tullimurdoch Mill' lies outside the proposed Development Area.</p>	Low	None	n/a	n/a
3	Kinkeadly, cairnfield	32082	75261	NO25SW 28 / MPK5080	NMRS; HER	<p>The NMRS and HER record that a group of four possible cairns are situated on the north flank of a low rise, about 50m east of the west end of a woodland shelter belt that runs along the northern side of the rough pasture north of Kinkeadly Farm. The largest is approximately 3m in diameter.</p> <p>The cairns were not found during field survey. Thick heather cover over uneven ground at the previously recorded location hindered the ability to locate the features described in the NMRS.</p>	Low	None	n/a	n/a
4	Balduff Hill, possible cultivation terraces	3222	7536	NO25SW 15 / NO25SW00 15	NMRS; HER	<p>The NMRS and HER record a set of possible terraces on the north-western side of Balduff Hill.</p> <p>The outline of possible terracing is visible, on aerial photographs from 1947, on the north-western flank of Balduff Hill on the lower slopes,</p>	Negligible	None	n/a	n/a

Site no	Site name	Easting	Northing	NMRS no / SMR no	Source	Description	Sensitivity	Type of Effect	Magnitude of Effect	Significance of Effect
						<p>outwith the site boundary, covering an area approximately 300m square.</p> <p>Field survey did not find any evidence of surviving terraces within the study area, although visibility of low relief features was constrained by dense ground vegetation in the area outwith the forestry.</p>				
5	Hilton Hill, cairn (burial cairn possible)	32175	75267	NO25SW 23 / MPK5075	NMRS; HER; Field survey	<p>The NMRS and HER records that a possible burial cairn is situated on the crest of Hilton Hill, overlooking Bamff from the north. It measures approximately 6m in diameter but most of its centre has been dug out, leaving little more than a rim no more than 0.2m high which encloses a low mound of cairn material at the centre.</p> <p>Field survey recorded that the cairn is as described by the NMRS. The cairn material in the central part stands to 0.5m high.</p>	Low	None	n/a	n/a
6	Trackways	322400	75280		Historical maps; Aerial photographs; Field survey	<p>A series of trackways are depicted on the Ordnance Survey 1st Edition map (1867) running northwards from Little Bamff Farm to Balduff Hill through an area of woodland. The trackways are not shown on the Ordnance Survey 2nd Edition map (1902).</p> <p>Trackways following a similar alignment to that shown on the Ordnance Survey map are visible on aerial photographs from 1947 - 1988.</p> <p>Field survey identified three short sections of the trackways depicted on the Ordnance Survey map. From 322311 752849 to 322173 753040, a section of the trackway is visible as a 1m to 2.5m wide hollow no more than 0.2m deep as it emerges from the forestry plantation. Thereafter, it is intermittently detectable as a slight heather-filled hollow until it becomes a 2m wide modern, stone surfaced trackway with a corresponding bank (322850 753537 to 322920 753485). From 322541 752970 to 322577 753024, a 15m to 20m long section of trackway can be seen as a slight hollow-way 2m wide and no more than 0.2m deep.</p>	Negligible	Direct: Access tracks for turbines 4-6 cross the alignment of the trackways in four places.	Imperceptible	Negligible
7	Trackway	320700	752300		Historical maps; Field survey	<p>A trackway, running from the main road north to Craighead (and Craighead Hill) is depicted on the Ordnance Survey 1st Edition (1867) and 2nd Edition (1902) maps. The same trackway is shown on the 2007 Ordnance Survey map.</p> <p>Field survey recorded that the trackway survives as a partially metalled, 3m wide track, which is still used as a farm / forestry access track.</p>	Negligible	None	n/a	n/a
8	Trackway	321750	752470		Field survey	<p>Field survey recorded the remains of a curvilinear hollow-way, measuring 1.8m wide and 0.2m to 0.5m deep. The hollow-way extends eastwards from a field gate and cuts through the remains of a field bank (10), at its south-eastern limit, and continues to run along the contours of Hilton Hill, alongside and parallel with the field bank for approximately 700m as a slight terrace into the slope.</p>	Negligible	None	n/a	n/a
9	Buildings	321500	752430		Historical maps; Field survey	<p>Five small, square roofed buildings are depicted on the Ordnance Survey 2nd Edition map (1902) within an area approximately 700m by 150m. The buildings are not depicted on earlier or subsequent maps.</p> <p>No upstanding remains of the buildings were visible during the field survey.</p>	Negligible	None	n/a	n/a
10	Enclosure	3220	7525		Maps; Aerial photographs; Field survey	<p>An oval enclosure, enclosing the summit of Hilton Hill and measuring approximately 750m by 450m, is visible on aerial photographs from</p>	Low	Direct: Access track for turbines 6	Low	Negligible

Site no	Site name	Easting	Northing	NMRS no / SMR no	Source	Description	Sensitivity	Type of Effect	Magnitude of Effect	Significance of Effect
						1968. Sections of the enclosure are depicted on the 1977 and subsequent Ordnance Survey maps and two walls or banks (11.1 and 11.2), aligned NNE-SSE and WNW-ESE respectively, are shown extending from the enclosure on the 2007 Ordnance Survey map. Field survey recorded the enclosure as comprising a turf and stone bank 2.5m wide and 0.4m to 1m high with a ditch, approximately 3m wide and 1.5m deep, around its inner edge. The field bank has been cut by a later trackway (8) on its south-western side.		and 7 cross the enclosure in two places		
11	Banks	3218	7529		Maps; Field Survey	The remains of two banks (11.1 and 11.2), associated with a large enclosure (10), are shown on the 2007 Ordnance Survey map. Field Survey identified field banks as turf banks measuring 2.5m wide and 0.4m to 1m high. The north aligned bank (11.1), which runs from 321201 752944 to 321661 752901, has no associated ditch visible. The west aligned bank (11.2), which runs from 321960 753202 to 321862 752914, has a ditch (waterlogged in places) along its northern side.	Low	Direct: Access track crosses and crane hardstanding for turbine 3 overlies bank 11.1 Access tracks crosses bank 11.2	Low	Negligible
12	Quarry	320580	752100		Historical maps; Field survey	A quarry is depicted on the Ordnance Survey 2nd Edition map (1902). Field survey identified the quarry which has been cut into a steep slope now covered by forestry plantation. The quarry is horseshoe shaped and measures 10m long by 6m wide and is 4m deep. It is open to the south-west, facing a public road and has been cut by a recent drainage ditch running alongside the road.	Negligible	None	n/a	n/a
13	Building	320750	751877		Field survey	Field survey recorded the remains of a rectangular building within a forestry plantation and close to the trackway (7). The building measures 11m long by 6m wide and is aligned east to west, with walls spread to 1.5m wide and 0.5m high. The building appears to have 2 compartments: the westernmost is the best preserved and measures 4.5m in length. The remains of a small clearance cairn (2.5m long, 1.5m wide, and 0.3m high) lie approximately 10m to the south of the building at 320745 751844.	Low	None	n/a	n/a
14	Field bank	320785	75209		Field survey	Field survey recorded the remains of a linear turf and stone bank, aligned north to south, within rough pasture. The bank is 80m in length by 2m wide and 0.2m to 0.3m high. A modern farm access track truncates the southern end of the bank, before it continues into the forestry plantation for a further 20m.	Negligible	Direct: Northern part of field bank overlain by substation	High	Minor
15	Enclosure (possible sheepfold)	320809	752142		Field survey	Field survey recorded the remains of a sub-circular enclosure to the north-east of a field bank (14) in an area of rough pasture adjacent to an old watercourse. The enclosure measures approximately 12m by 10m and is defined by a stone and turf bank; the southern and western sides of the enclosure are the best preserved, measuring 1.5m wide and 0.2m to 0.3m high. The eastern arc of the enclosure is just traceable as a low bank 0.1m high and the northern arc appears to have been formed by the slope of the hill.	Negligible	Direct; Enclosure overlain by substation	High	Minor

Site no	Site name	Easting	Northing	NMRS no / SMR no	Source	Description	Sensitivity	Type of Effect	Magnitude of Effect	Significance of Effect
16	Clearance spread	321199	752339		Field survey	Field survey recorded a large spread of clearance stone approximately 100m to the west of an old field enclosure (17). The clearance spread measures 14m long by 6m wide and is up to 1m high.	Negligible	None	n/a	n/a
17	Field system / enclosures	321257	752320		Field survey	Field survey records the remains of the northern edge of a former field system / enclosures within an area of rough pasture. The site comprises of two stone and turf banks which range in width from 1.5m to 2.5m and are 0.3m high. The first bank is roughly L-shaped, aligned roughly west to east, with both ends terminating at a modern field wall. A second bank runs from the middle of the first to the south for approximately 100m where it too terminates at the modern field wall. A modern farm access track cuts across the northwest corner of the feature. The banks do not continue south of the more recent field wall, although it is probable that they originally did so.	Negligible	None	n/a	n/a
18	Spring	321536	752457		Field survey	A small natural spring was identified during the field survey within an area of rough pasture. The bedrock around the spring appears to have been deliberately quarried at the eastern side to produce a larger opening and to create a small, circular shallow pool of water approximately 5m in diameter. It may have been used during the occupation of the buildings (9) recorded on the Ordnance 2nd Edition (1902) immediately to the west.	Negligible	None	n/a	n/a
19	Clearance cairn	321229	752585		Field survey	Field survey records a small clearance cairn lying immediately to the west of an area of forestry plantation. The cairn is 3m long by 2.5m wide and is 0.4m to 0.8m high.	Negligible	None	n/a	n/a
20	Trackway	320951	752550		Field survey	Field survey identified a sinuous trackway aligned roughly east to west, leading from a farm gate and crossing an area of rough pasture. The trackway, best preserved at its western end, is mostly around 2m wide and survives as a slight hollow-way no more than 0.3m deep.	Negligible	None	n/a	n/a
21	Inscribed stone	321628	752411		Field survey	Field survey recorded a small weathered stone, partially obscured by grass at the base of a gate post. The stone lies flush with the ground with only the upper face being visible. It measures 0.3m by 0.35m in plan and has the remains of an inscription on its surface; the inscription is, however, very weathered although the middle letters appear to read 'S U V R'.	Negligible	None	n/a	n/a
22	Rig and furrow cultivation	322228	752466		Aerial photographs; Field survey	An area of rig and furrow cultivation is visible on aerial photographs from 1968. Field survey identified surviving traces of rig and furrow cultivation covering an area approximately 300m long and 100m wide. The rig is aligned NNW-SSE and is 8m to 10m wide.	Negligible	None	n/a	n/a
23	Field wall	322182	752455		Field survey	Field survey identified the tumbled remains of an old, T-shaped section of field wall that is depicted on the 2007 Ordnance Survey 1st Edition map within an area of rough pasture. The wall, which is of dry-stone construction, measures 0.9m wide and 1.2m high (max) and demarcates the northern end of an area of former rig and furrow (22). The wall continues to the south of the survey area boundary and aligns with the current field boundary a short distance to the west of Little Bamff.	Negligible	None	n/a	n/a
24	Clearance cairns	322321	752488		Field survey	Field survey identified the remains of four clearance cairns at the southeast corner of an area of relict rig and furrow (22). The cairns range in size from 3m to 8m long by 3m to 6m wide and are between 0.2m and 0.8m high. The largest cairn (at 322330 752487) partially	Negligible	None	n/a	n/a

Site no	Site name	Easting	Northing	NMRS no / SMR no	Source	Description	Sensitivity	Type of Effect	Magnitude of Effect	Significance of Effect
						overlies the remains of a field wall (23), suggesting that they are of a later date.				
25	Shepherds' cairn / Marker cairn	322384	753561		Field Survey	Field survey identified a small, circular turf covered cairn near the summit of Balduff Hill, on its southwest side. The cairn is 2.5m in diameter and is 0.5m high. A few medium-sized stones are visible under the turf.	Low	None	n/a	n/a

APPENDIX 11.2: External Receptors within 5km of the proposed Development

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
124	Kilry, standing stone 100m NNE of Kilry School	Scheduled	324325	754484	1	2.2	High	A standing stone of Neolithic or Bronze Age date, 2.5m high, located in woodland on the west side of the River Isla in the grounds of Kilry School.	Low	Medium (Localised)	Imperceptible: Screened by surrounding woodland and buildings to west.	Negligible
1505	Parkneuk, two stone circles 550m E of	Scheduled	319480	751396	7	2	High	Remains of two stone circles, of Neolithic to Bronze Age date, the most northerly being represented by a four post setting, located in enclosed land on a flat knoll above Alyth Burn. There are other similar sites in the area, including East Drimmie Stone Circle to the southwest. The southerly circle is enclosed by mixed woodland; the most northerly is open with good views along the burn valley and to the higher ground to the north and northeast. Surrounding landscape is mixed rough pasture and arable fields.	High	High	Low to Medium: Clear views of development site, Hilton Hill and Balduff Hill feature prominently in view from northern-most stone circle, and Drumderg windfarm also visible in some views.	Moderate (Figure 11.3)
1537	East Drimmie, stone circle 650m ENE of	Scheduled	318486	750052	7	3.7	High	Remains of stone circle of Neolithic to Bronze Age Date represented by 7 fallen stone slabs forming an arc and one additional stone slightly off line. There are other similar sites in the area including Parkneuk stone circles (1505) to the northeast. The stone circle is located in rough pasture in a clearing on the southwest edge of modern forestry plantation.	Negligible	Low	Imperceptible: View of development screened by forestry	Negligible (Figure 11.4)
1591	Barry Hill, fort	Scheduled	326215	750376	7	4.4	High	Well preserved multi-phase Iron Age fort located on the summit of Barry Hill. The fort has good views of the surrounding area, particularly along Glen Isla to the north and northwest.	High	High	Low to Medium: Good views of development area, Ardormie Hill and Balduff Hill are prominent views in landscape, but still relatively distant.)	Moderate (Figure 11.5)
4586	Easter Cammock, settlements, field systems and cairn 650m SW of	Scheduled	322775	757998	2	4.8	High	Remains of a multi-period settlement site including 13 Late Bronze Age to Iron Age circular stone-walled houses, a burial cairn and field systems, and 4 pre-improvement longhouses with associated field systems. Site is located in upland moorland on an east facing slope of Broom Hill. Modern forestry plantation exists to the west, and there has been recent felling to the south. There are good views along the Glen Isla river valley to the southeast.	Moderate	High (Localised)	Imperceptible: View of development partially screened by position and topography, (but views of Balduff Hill and Ardormie Hill).	Negligible
4640	Redlatches, settlement and field system 1900m SSE of	Scheduled	321236	757464	2	4.3	High	Well preserved remains of Late Bronze Age to Iron Age settlement and field system consisting of six circular stone-walled houses with field banks, clearance cairns and lynchets surrounding. There	Moderate	High (Localised)	Low: Partially restricted view of development due to local	Minor (Figure 11.6)

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
								is a similar settlement site nearby at Easter Cammock (4586). The site is located on the south facing slopes of Druim Dearg in upland moorland between two areas of forestry. There are good views to the south and southeast.			topography, but good views of both Balduff Hill and Ardormie Hill.	
5581	Craighead, settlement and field system 900m N of	Scheduled	319545	755020	7	2.6	Medium	Remains of Late Bronze Age to Iron Age settlement consisting of eight circular stone faced houses. Field system elements of banks, clearance cairns and ancillary structures surround the houses. The site is located near the summit of Hill of Three Cairns and is now within a clearing surrounded by modern forestry.	Negligible	Low	Imperceptible: View of Development screened by forestry	Minor
4368	Bamff House	Category B listed	322172	751470	7	1.2	Medium	Original tower house dating to the late 16th century with 19th century additions and alterations. Associated ancillary buildings including an icehouse (4370) and South Lodge (4367). Bamff House is set within open improved ground/fields with woodland immediately to the north, and surrounding the grounds to the west, south and east. The approach to the house is from the southeast and is largely screened by trees until the house itself reached. Much of the views from the house are restricted to the grounds themselves.	Moderate (Localised)	Medium (Localised)	Medium: Views of Development partially screened by woodland, (although the view of the house from the grounds may be affected).	Moderate
11345	Craig Old Burial Enclosure	Category B listed	325046	752571	5	2.4	Low	18th century burial ground located within arable land adjacent to public road.	Moderate (Localised)	Low	Low	Negligible
48618	Lintrathen Reservoir, Main Lodge and Stable Range	Category B listed	327295	754091	6	4.7						
4367	Bamff House South Lodge	Category C (S) listed	322205	750668	5-6	2	Low	Mid 19th century L-Plan lodge with modern extension. Set within woodland forming grounds and approach to Bamff House (4368).	Moderate (Localised, association with Bamff House and ancillary structures)	Low	Imperceptible: View of development screened by woodland	Negligible
4369	Bamff House Sundial	Category C (S) listed	322135	751472	7	1.2	Low	Sundial dating to 1907. Set within immediate grounds of Bamff House (4368).	Moderate (Localised, association with Bamff House and ancillary structures)	Low	Imperceptible: View of development screened by woodland	Negligible
4370	Bamff House Icehouse	Category C (S) listed	321921	751374	7	1.3	Low	Early 19th century domed underground chamber, located within open ground forming grounds of Bamff House (4368).	Moderate (Localised, association with Bamff House and ancillary structures)	Low	Imperceptible: View of development screened by woodland	Negligible
11439	Fornethy Residential School	Category C (S) listed	324648	755645	3-4	3.3	Low	Large 16th century castellated mansion house set within a clearing surrounded by woodland.	Moderate (Localised)	Low	Imperceptible: View of development	Negligible

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
											partially screened by woodland	
13747	Bridge of Craigisla over River Isla	Category C (S) listed	325175	753815	1-2	2.6	Low	Bridge in use as a road bridge for the B954 public road. Located over the River Isla with arable land surrounding.	Moderate (Localised)	Low	Imperceptible	Negligible

APPENDIX 11.3: Cultural Heritage Receptors between 5km and 10km from proposed Development

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
126	Knowehead, standing stones 250m SSE of	Scheduled Monument	329835	758239	6	8.8	High	Two standing stones on a south-facing slope within arable land. Localised setting along Quhairty Burn.	Moderate (Localised)	High (Localised)	Imperceptible: Views of Development restricted by forestry plantation and local topography.	Negligible
129	Meikle Kenny, standing stone	Scheduled Monument	331762	754150	7	9.1	High	Located on a rise prominent in the local landscape with good views out to the west and south over arable land, and to the northwest towards Brankham Hill, the location of several other domestic and funerary monuments (4419) of a similar age. The standing stone is the remains of a stone circle, associated with two other stone circles (353), to the east, now within forestry.	Moderate	High	Low: Views of Development theoretically possible.	Minor
132	Pitmudie, stone setting 315m N of	Scheduled Monument	327455	756478	6	5.9	High	A Linear setting of large stones, now located within modern forestry plantation.	Negligible	Low	Imperceptible: Views of Development screened by forestry plantation and local topography.	Negligible
136/4627	Airlie, souterrain	Scheduled/ Category B Listed	330569	751541	7	8	High	Located within an arable field. Subterranean feature.	Moderate (Localised)	High (Localised)	Imperceptible	Negligible
353	Baldovie, stone circles 450m & 480m WNW of	Scheduled Monument	331806	754190	7	9.2	High	The remains of two stone circles associated with a standing stone (129). The stone circles are a rare representation of funerary/burial monuments of the Bronze Age. They are now located within a modern forestry plantation.	Negligible	Low	Imperceptible	Negligible
2306	Cardean, Roman fort	Scheduled Monument	328873	745980	7	9.4	High	Crop-mark within arable field.	Moderate (Localised)	High (Localised)	Imperceptible	Negligible
4419	Brankam Hill, houses, barrows, cairns and stone setting	Scheduled Monument	329979	755860	7	7.8	High	The remains of several Bronze Age domestic and funerary structures located along the summit and on the south facing slopes of Brankam Hill within rough pasture. The funerary monuments in particular are significant in that they reinforce other local examples at Strone Hill (4544) and Baldovie (129, 353). There are good views out to the surrounding landscape, particularly across to the west and south over the Loch of Lintrathen and the valleys of the River Isla and Megram Water.	High: moorland setting and related monuments nearby	High (Localised)	Imperceptible: Distant views of development theoretically possible.	Negligible
4544	Strone Hill, settlements, fields, cairns, stone setting & hillside figures	Scheduled Monument	329048	756645	7	7.3	High	The remains of a multi-period settlement site consisting of prehistoric and pre-improvement settlement features and prehistoric funerary monuments, located in rough pasture on the slopes of the west side of Stone Hill. Good views out across the surrounding landscape, particularly to the southwest and south over the Loch of	High: moorland setting and related monuments nearby	High (Localised)	Imperceptible: Distant views of development theoretically possible.	Negligible

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
								Lintrathen and the valleys of the River Isla and Megram Water.				
4703	Corb, settlement 1000m NNW of	Scheduled Monument	315989	757899	7	7.2	High	The remains of a well-preserved later Bronze Age to Iron Age settlement and field system, located in rough pasture on the south-western slopes of Beddigrew Hill. Association with other later prehistoric settlement and agricultural activity present in the surrounding landscape, concentrated along burn valleys and the Black Water Valley.	High: moorland setting and related monuments nearby	High (Localised)	Low	Minor
5396	Middleton Muir, settlements, field systems, cairns and deer dyke	Scheduled Monument	312763	748431	7	9.3	High	The remains of a Bronze Age settlement, field system and burial cairns, comprising at least 30 turf covered roundhouses, field banks and clearance cairns and at least 5 burial cairns. The site is one of the most extensive assemblages of prehistoric remains in northeast Perthshire. Scheduled area also includes remains of Buzzart Dyke, a medieval deer dyke measuring 1.4m high with an associated ditch 1.2m deep. Located in upland moorland/rough pasture on the edges the Glen Ericht river valley.	High: moorland setting and related monuments nearby	High (Localised)	Imperceptible: Distant views of the Development would theoretically be possible from this site.	Negligible (Figure 11.7)
5777	Dalrulzion, settlement 800m SW of Craigton	Scheduled Monument	312563	757430	1	9.7	High	Remains of Late Bronze Age settlement and field system located within a clearing in a modern forestry plantation.	Negligible	Low	Imperceptible	Negligible
6298	Milton of Ruthven, ring ditch 250m NE of	Scheduled Monument	329434	748924	7	7.9	High	Crop-mark within arable field.	Low	Medium (Localised)	Imperceptible	Negligible
6301	Auchrannie, enclosure 550m NE of	Scheduled Monument	328388	752773	7	5.7	High	Crop-mark within arable field.	Low	Medium (Localised)	Imperceptible	Negligible
6307	Grange of Airlie, enclosure and cairn 700m SSW of Faulds Cottage	Scheduled Monument	330835	750222	7	8.6	High	Crop-mark within arable field on high ground.	Low	Medium (Localised)	Imperceptible	Negligible
6334	Bridgend of Ruthven, souterrain SW of	Scheduled Monument	328503	748304	4	7.7	High	Crop-mark within arable field.	Low	Medium (Localised)	Imperceptible	Negligible
6343	Cairn Motherie, cairn, Creigh Hill	Scheduled Monument	327116	759345	1	7.7	High	A cairn located in a prominent location at the summit of Creigh Hill in upland moorland, with good views of the surrounding landscape, and intervisibility with Cairn Plew (6842).	High: moorland setting and related monuments nearby	High	Imperceptible: wireframe shows only two turbine tips visible in distant views. Development partially screened by intervening topography. Little effect on intervisibility of Cairn Motherie	Negligible (Figure 11.8)

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
											and Cairn Plew (6842) to southwest.	
6344	Easter Coul, cairns 250m N of	Scheduled Monument	328301	758421	6	7.7	High	A group of cairns located in rough pasture immediately to the south of an area of modern forestry plantation. Possible views down towards another cairn (6846). Localised setting along the Inzion Burn valley.	Moderate (localised)	High (Localised)	Imperceptible	Negligible
6350	Selvie, ring ditch and pit enclosure 500m NE of	Scheduled Monument	328101	748422	3	7.1	High	Crop-mark within arable field.	Low	Medium (Localised)	Imperceptible	Negligible
6351	Dillavaird, palisaded homestead and souterrain 450m E of	Scheduled Monument	329930	750283	7	7.7	High	Crop-mark within arable field.	Low	Medium (Localised)	Imperceptible	Negligible
6842	Cairn Plew, cairn 1350m NW of Wester Coul	Scheduled Monument	326432	758430	7	6.6	High	A cairn located in a prominent location at the summit of a hill in upland moorland, with good views of the surrounding landscape, and intervisibility with Cairn Motherie (6343).	High: moorland setting and related monuments nearby	High	Low: Distant views of turbines.	Minor (Figure 11.9))
6844	Torrax, cairn 1150m WNW of	Scheduled Monument	326150	756425	5	4.8	High	A Low grass and gorse covered mound within rough pasture between two areas of modern forestry plantation. Views to the south to another cairn (8503), and a localised setting within the Melgam Water river valley.	Moderate (localised)	High (Localised)	Imperceptible	Negligible
6846	Wester Coul, cairn 350m ESE of	Scheduled Monument	327586	757261	6	6.6	High	A grass covered mound within an arable field with modern forestry plantation to the south nearby. Localised setting within Melgam Water river valley.	Moderate (localised)	High (Localised)	Imperceptible	Negligible
7079	Kirkhowe of Ruthven, cairn 580m NNW of	Scheduled Monument	328405	749438	4	6.7	High	Bracken and tree covered remains of a burial cairn, now located within modern forestry plantation.	Negligible	Low	Imperceptible	Negligible
7173	The Welton, fort, barrows & settlement S of	Scheduled Monument	319642	743899	1	8.9	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7176	The Welton, ring-ditch & souterrains 450m WSW of	Scheduled Monument	319148	743990	2	8.9	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7177	The Welton, palisaded enclosure & unenclosed settlement 270m SW of	Scheduled Monument	319325	743934	7	8.9	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7255	Grangemount, unenclosed settlement 330m S of	Scheduled Monument	324058	745200	6	7.7	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7260	Brockhill Park, enclosure 400m	Scheduled Monument	326333	746212	3	7.7	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
	SSW of Balhary											
7261	Jordanstone, unenclosed settlement SW of	Scheduled Monument	327033	747194	3	7.3	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7262	Hallyards Cottages, moated settlement S of	Scheduled Monument	327896	746412	2	8.4	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7263	Haughend, enclosure 500m W of	Scheduled Monument	328715	746812	7	8.6	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7316	Ryehill, unenclosed settlement 400m NNW of	Scheduled Monument	322642	743680	7	9	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7317	Millhorn, square barrow 450m SW of	Scheduled Monument	321699	743525	7	9.2	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7322	Millhorn, ring-ditch 300m S of	Scheduled Monument	322010	743454	7	9.2	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7323	Millhorn, unenclosed settlement 120m SE of	Scheduled Monument	322191	743761	7	8.9	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7324	Ryehill, ring-ditch 290m NW of	Scheduled Monument	322742	743507	7	9.2	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7327	Coupar Grange, monastic grange NW of	Scheduled Monument	322562	743110	7	9.6	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7330	East Myreriggs, enclosure 150m NE of	Scheduled Monument	321438	742914	7	9.8	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
7699	Grangemount, unenclosed settlement 350m SSW of	Scheduled Monument	323822	745228	6	7.7	High	Crop-mark within arable field.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
8503	Torrax, cairn 650m WSW of	Scheduled Monument	326426	755824	7	4.7	High	Grass-covered mound within rough pasture between two areas of modern forestry plantation. Views to the north to another cairn (6844), and a localised setting within the Melgam Water river valley.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
4379	Balhary House	Category A Listed Building			4	7.4						
13757	Balintore Castle	Category A Listed Building	329028	759015	6	8.7	High	Mid-19th century two-storey Baronial Mansion with entrance to west. Located in agricultural land on a high prominent position looking down towards Quhairty Burn with woodland surrounding to the west, north and east.	Moderate (Localised)	High (localised)	Low: distant views of development from main terrace; partly screened by topography and forestry.	Minor

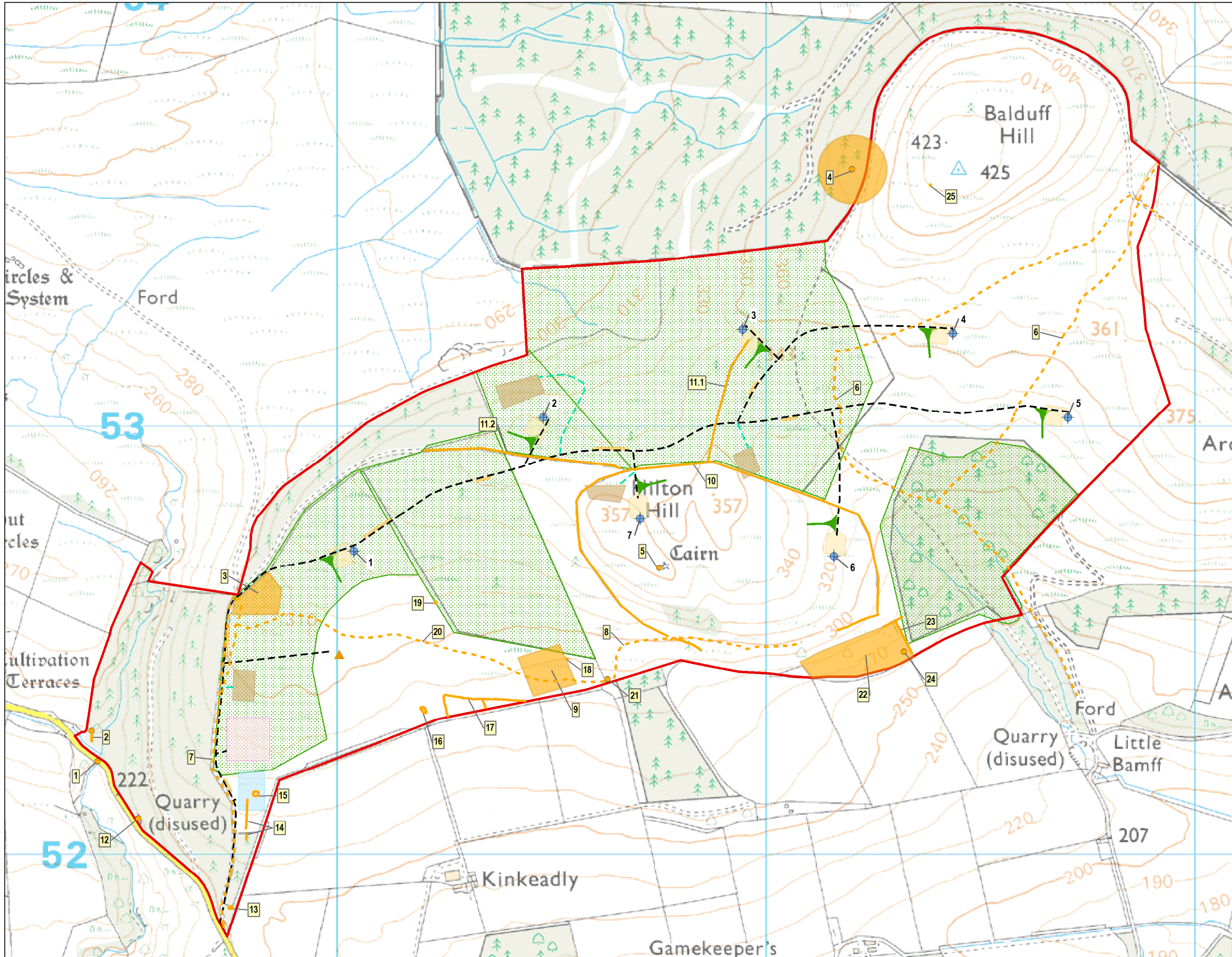
Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
52	Balendoch House	Category B Listed Building	328689	747678	2	8	Medium	Small classic mansion house dating to 1800. Local setting within woodland and wooded approaches from the southwest. Arable farmland surrounding.	Moderate	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4378	Bardmony Bank House	Category B Listed Building	325020	745154	7	8.1	Medium	Early 19th century two-storey house located in low lying arable farmland with woodland to the north of the building.	Moderate (localised)	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4380	Balhary Stables and Coachman's Cottage	Category B Listed Building	326354	746667	3	7.3	Medium	Ancillary building associated with Balhary House (4379). Set within woodland of Balhary House grounds.	High (localised)	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4381	Balhary, footbridge between House and Walled Garden	Category B Listed Building	326370	746573	3	7.4	Medium	Ancillary building associated with Balhary House (4379). Set within woodland of Balhary House grounds.	High (localised)	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4382	Balhary Walled Garden	Category B Listed Building	326290	746580	3	7.4	Medium	Ancillary building associated with Balhary House (4379). Set within woodland of Balhary House grounds.	High (localised)	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4383	Balhary Sundial	Category B Listed Building	326325	746525	3	7.4	Medium	Ancillary building associated with Balhary House (4379). Set within woodland of Balhary House grounds.	High (localised)	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4384	Balhary Gardeners' Cottages	Category B Listed Building	326279	746660	3	7.3	Medium	Ancillary building associated with Balhary House (4379). Set within woodland of Balhary House grounds.	High (localised)	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4384	Balhary Gardeners' Cottages	Category B Listed Building	326273	746652	3	7.3	Medium	Ancillary building associated with Balhary House (4379). Set within woodland of Balhary House grounds.	High (localised)	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4386	Jordanstone House	Category B Listed Building	327295	747362	2	7.3	Medium	Late 18th century two storey house with later additions and restorations, associated with ancillary structures (4387, 4390), set within wooded landscape with arable land surrounding.	Moderate (localised)	Medium (Localised)	Imperceptible: Low lying with arable fields and Alyth to north-west	Negligible
4387	Jordanstone Sundial	Category B Listed Building	327201	747377	3	7.2	Medium	Associated with Jordanstone House (4386). Set within wooded landscape.	Moderate (localised)	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4389	Hallyards House	Category B Listed Building	327954	746776	3	8.2	Medium	Early 18th century T-shaped mansion with later alterations. Set within wooded landscape with wooded approaches from South. Arable land in surrounding area.	Moderate (localised)	Medium (Localised)	Imperceptible: Screened by topography and woodland	Negligible
4390	Burial Enclosure of Admiral Knight, Jordanstone	Category B Listed Building	327340	747350	3	7.3	Medium	Associated with Jordanstone House (4386). Set within wooded landscape.	Moderate (localised)	Medium (Localised)	Imperceptible: Low lying with arable fields and Alyth to north-west	Negligible
4616	Old Bridge of Dean, over Dean River	Category B Listed Building	328782	745877	6	9.4	Medium	Bridge still in use as a public road bridge over River Dean, within arable land and woodland to east.	Moderate (localised)	Medium (Localised)	Imperceptible: Low lying with arable fields and	Negligible

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
											Alyth to north-west	
4628	Airlie Castle	Category B Listed Building	329280	752171	7	6.6	Medium	The medieval remains of Airlie Castle, including an enceinte wall and entrance gateway surmounted by a tower, with a plain classic three-storey mansion house dating to 1790 attached. Set within the policies of Airlie Castle GDL. The castle is surrounded by woodland, but would originally have held important views out across to the Grampian Mountains.	High (Localised): GDL policies relate to late 18th century mansion, although not the former castle.	Medium (Localised)	Low: screened by woodland	Minor
4629	Airlie Castle, Stables	Category B Listed Building	329510	752025	7	6.9	Medium	Two-storey 19th century stables, setting within Airlie Castle GDL.	High (Localised)	Medium (Localised)	Imperceptible: screened by woodland	Negligible
5494	Coupar Grange, Model Cottages, Easter and Wester	Category B Listed Building	322488	743242	7	9.4	Medium	Cottages dating to 1900, located within low-lying arable farmland.	Moderate (localised)	Medium (Localised)	Imperceptible: Views of Development restricted by local topography	Negligible
5496	Polcalk, Farmhouse	Category B Listed Building	323249	746371	7	6.4	Medium	Late 18th century farmhouse associated with 17th century doocote (5497) and early 19th century threshing mill (5498). Located in arable farmland with woodland to rear.	Moderate (localised)	Medium (Localised)	Imperceptible: Views of Development restricted by local topography	Negligible
5497	Polcalk doocote	Category B Listed Building	323259	746383	6	6.4	Medium	17th century doocote associated with late 18th century farmhouse (5496) and early 19th century threshing mill (5498). Located in arable farmland with woodland to rear.	Moderate (localised)	Medium (Localised)	Imperceptible: Views of Development restricted by local topography	Negligible
5498	Polcalk Threshing Mill	Category B Listed Building	323273	746389	6	6.4	Medium	Early 19th century threshing mill (5498) associated with late 18th century farmhouse (5496) and 17th century doocote (5497). Located in arable farmland with woodland to rear.	Moderate (localised)	Medium (Localised)	Imperceptible: Views of Development restricted by local topography	Negligible
5666	Glenericht Lodge and Gates on Blairgowrie to Bridge of Cally Road	Category B Listed Building	316319	750027	7	5.4	Medium	19th century gothic style lodge, located within arable fields adjacent to A93 public road, partially screened by mature trees along road.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
6152	Kinloch House, Steading	Category B Listed Building	326639	744254	7	9.6	Medium	Late 18th century steading associated with 18th century mansion with 19th century additions (61540, and early 18th century sundial and walled garden (6153). Located in low lying arable farmland with wooded approach road from the south east.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
6153	Kinloch House, Walled Garden and Sundial	Category B Listed Building	326729	744333	7	9.5	Medium	Early 18th century sundial and walled garden (6153) associated with a late 18th century mansion (6154) and steading (6152). Located in low lying arable farmland with wooded approach road from the south east.	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible
6154	Kinloch House (Now Hotel)	Category B Listed Building	326760	744347	7	9.5	Medium	Late 18th century mansion with 19th century additions associated with an early 18th century sundial and walled garden (6153) and a late 18th	Moderate (localised)	Medium (Localised)	Imperceptible	Negligible

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
								century steading (6152). Located in low lying arable farmland with wooded approach road from the south east.				
11330	Knockshannoch, Kennels	Category B Listed Building	323282	759840	2	6.7	Medium	Kennels dating to late 19th century associated with Lodge (12384); Youth hostel (11268); Generator House (11369) and Coach House and stables (11370). Set within woodland with arable fields to the southwest and south east, and forestry to the north.	Moderate (Localised)	Medium (Localised)	Imperceptible: Screened by woodland and on low lying ground with views to Development restricted by local topography and forestry plantation.	Negligible
11368	Knockshannoch, Youth Hostel	Category B Listed Building	323330	759701	2	6.5	Medium	Building dating to late 19th century associated with Kennels (11370); Lodge (12384); Generator House (11369) and Coach House and stables (11370). Set within woodland with arable fields to the southwest and south east, and forestry to the north.	Moderate (Localised)	Medium (Localised)	Imperceptible: Screened by woodland and on low lying ground with views to Development restricted by local topography and forestry plantation.	Negligible
11369	Knockshannoch, Old Generator House	Category B Listed Building	323339	759787	3	6.6	Medium	Building dating to late 19th century associated with Kennels (11370); Youth hostel (11268); Lodge (12384) and Coach House and stables (11370). Set within woodland with arable fields to the southwest and south east, and forestry to the north.	Moderate (Localised)	Medium (Localised)	Imperceptible: Screened by woodland and on low lying ground with views to Development restricted by local topography and forestry plantation.	Negligible
11370	Knockshannoch, Coach House and Stables with adjacent Pig Sty	Category B Listed Building	323279	759881	2	6.7	Medium	Buildings dating to late 19th century associated with Kennels (11370); Youth hostel (11268); Generator House (11369) and Lodge (12384). Set within woodland with arable fields to the southwest and south east, and forestry to the north.	Moderate (Localised)	Medium (Localised)	Imperceptible: Screened by woodland and on low lying ground with views to Development restricted by local topography and forestry plantation.	Negligible
11420	Meikle Kenny Farmhouse	Category B Listed Building	330879	753648	7	8.2	Medium	Two-storey farmhouse dating to 1755 with later 1830 additions, located within arable farmland. Set within small area of mature woodland to west and south.	Moderate (Localised)	Medium (Localised)	Imperceptible: Main views to south, view to windfarm screened by trees.	Negligible
12384	Knockshannock	Category B	323337	759577	2	6.4	Medium	Lodge dating to late 19th century associated with	Moderate	Medium	Imperceptible:	Negligible

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
	Lodge	Listed Building						Kennels (11370); Youth hostel (11268); Generator House (11369) and Coach House and stables (11370). Set within woodland with arable fields to the southwest and south east, and forestry to the north.	(Localised)	(Localised)	Screened by woodland and on low lying ground with views to Development restricted by local topography and forestry plantation.	
17598	Ruthven Castle	Category B Listed Building	330207	747913	7	9.1	Medium	Remains of 16th century tower house now much altered and converted to garden store. Set within wooded area with arable farmland surrounding.	Moderate (Localised)	Medium (Localised)	Imperceptible: Low lying ground, Alyth and local topography restrict views to Development	Negligible
17600	Ruthven Bridge over River Isla	Category B Listed Building	328947	748885	3	7.5	Medium	Localised setting over river.	Moderate (Localised)	Medium (Localised)	Imperceptible	Negligible
18316	Sawmill at Bridge of Dean (former Lint Mill)	Category B Listed Building	328730	745840	7	9.3	Medium	Mid-19th century buildings with waterwheel within arable landscape adjacent to river.	Moderate (Localised)	Medium (Localised)	Imperceptible: low-lying ground	Negligible
18317	Old Bridge of Dean (so-called Roman Bridge)	Category B Listed Building	328782	745877	6	9.4	Medium	17th century bridge, reconstructed in mid-19th century located over river Dean in arable land with woodland nearby.	Moderate (Localised)	Medium (Localised)	Imperceptible: low-lying ground, screened by woodland	Negligible
19807	Ruthven Old Bridge over River Isla	Category B Listed Building	328945	748894	7	7.5	Medium	Localised setting over river.	Moderate (Localised)	Medium (Localised)	Imperceptible	Negligible
48618	Lintrathen Reservoir, Main Lodge Including Stable Courtyard and Archway, Entrance Gatepiers and Gates	Category B Listed Building	327312 327295	754085 754091	3	4.7	Medium	Late 19th century two-storey baronial lodge, with the principal view from the western side towards the associated West Lodge. Set within a wooded landscape surrounding Loch Lintrathen Reservoir.	Moderate (Localised)	Medium (Localised)	Imperceptible: Views out screened by surrounding trees, and principle setting is that of the Loch.	Negligible
	Airlie Castle	GDL	329286	752180	7	6.6	High	Airlie Castle GDL provides the setting for Category B-Listed Airlie Castle, a medieval castle dating to 1432. Covers 94ha along the valleys forming the confluence of the River Isla and Melgam Water. Grounds originally laid out in the late 18th century, with later phases (19th century and mid-20th century). Contains outstanding examples of Victorian and Edwardian formal gardens and woodland walks. The views out from and into the GDL are restricted in many places by the valley sides and woodland screening. The surrounding landscape is predominantly of rolling arable land.	Moderate (Localised-to river valleys)	High (Localised)	Low	Minor
	Craighall	GDL	317714	747984	2	5.8	High	Craighall Rattray GDL provides the setting for	Moderate	High	Imperceptible	Negligible

Site no.	Site name	Status	Easting	Northing	No. of turbine tips visible	Distance to nearest turbine (km)	Sensitivity of receptor	Setting	Contribution of setting	Sensitivity of setting	Effect magnitude	Significance of predicted effect
	Rattray							Category B Listed Craighall Rattray Mansion, a mid-19th century baronial mansion. Covers 71ha and includes ancient woodland and parkland along the Glen Ericht Gorge. The principle views are along the gorge and from the east drive to the house, which are screened by the woodland along the gorge and surrounding the house. The mansion itself can be partially seen from the west side of the policies near the A93 public road, but views of the development behind the mansion would be restricted through local topography and modern forestry plantation.	(Localised-to river valleys)	(Localised)		



- Key:
- Site Boundary
 - ⊕ Turbine Position
 - Access Track
 - Haul Road
 - ▲ Met Mast
 - Construction Compound
 - Crane Hardstanding
 - Borrow Pit
 - Substation
 - Passing Places
 - Turning Area
 - Cultural Heritage Site (point)
 - Cultural Heritage Site (area)
 - Cultural Heritage Site (linear)
 - Trackway
 - Young Forestry Plantation

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Fig. No: 11.1 Revision:

Title:
**Cultural Heritage:
 Constraints Map**

Project:
**Bamff Windfarm, near Altyh,
 Perth and Kinross**

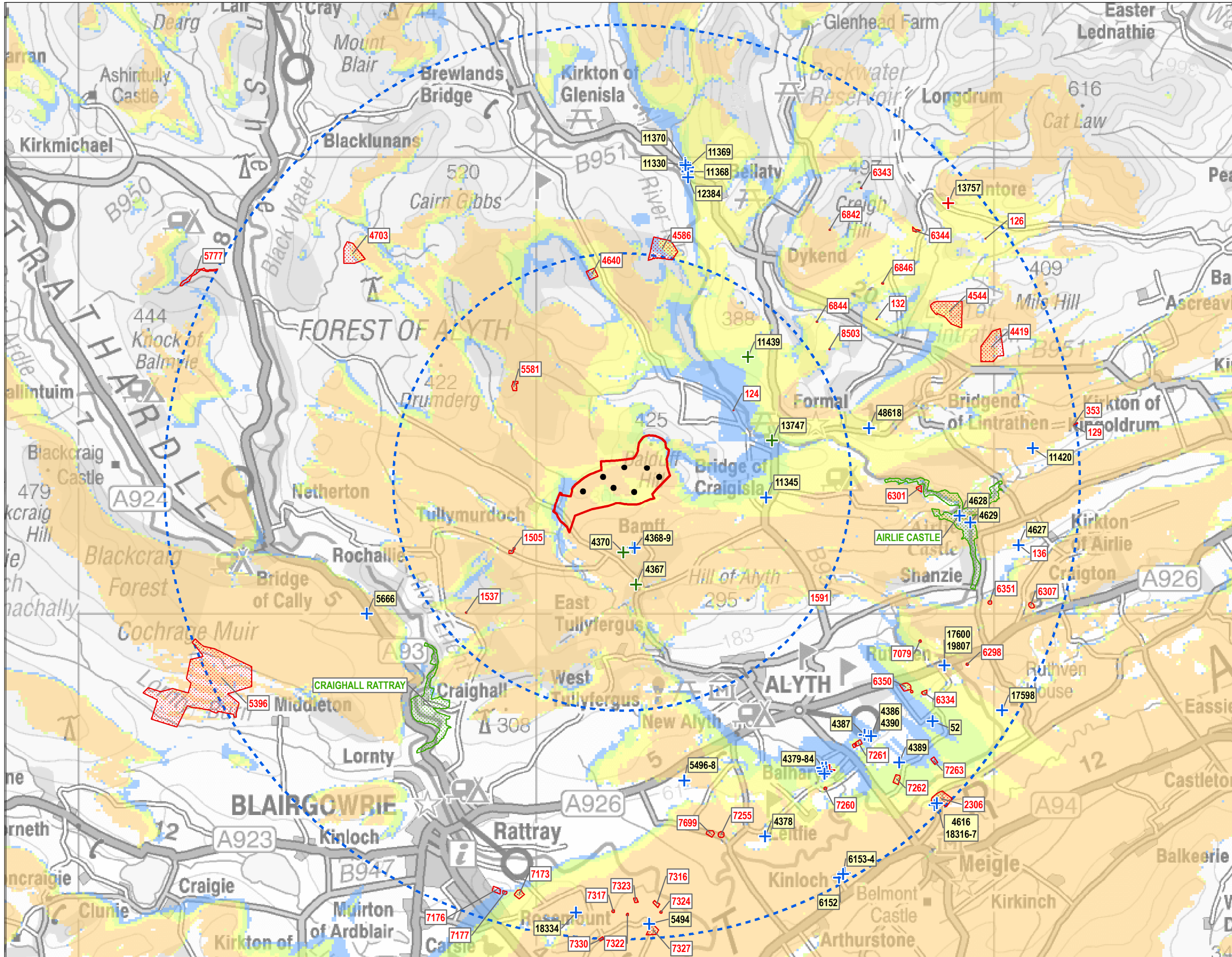
Scale:
1:8,000 A3

Client:
Scottish Power Renewables

Drawn by: SW Report No:

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- Key:
- Site Boundary
 - Turbine Location
 - Scheduled Monument
 - + Listed Building Category A
 - + Listed Building Category B
 - + Listed Building Category C(S)
 - Garden and Designed Landscape
 - 5km and 10km Buffer

- Key:
- bamff**
- VALUE**
- 1 - 2
 - 3-4
 - 5-6
 - 7

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Fig. No: 11.2 Revision:

Title:
**Cultural Heritage:
External Receptors**

Project:
**Bamff Windfarm, near Altyh,
Perth and Kinross**

Scale:
1:75,000 A3

Client:
Land Use Consultants

Drawn by: SW Report No:

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