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Dersalloch Wind Farm, South Ayrshire

Cultural Heritage

11.0 Archaeology and Cultural Heritage

11.1 Introduction

1. This chapter of the Environmental Statement (ES) Addendum addresses the potential for direct effects on cultural heritage sites and features following the design changes made which comprise the Development. The Development for which consent is sought is described in *Chapter 4: Project Description* of this ES Addendum, as now amended following design iterations. This ES Addendum presents information on the likely significant environmental effects of the Development where these have been received and reassessed as a result of the design iterations and should be read together with the 2005 Dersalloch ES and 2006 ES Addendum. The assessment was undertaken by CFA Archaeology Ltd and conducted in accordance with the Institute for Archaeologists Code of Conduct (Ref. 11-1) and Standard and Guidance for Archaeologists: Desk-based Assessment (Ref. 11-2).
2. The specific objectives of the cultural heritage study were to:
 - Identify the cultural heritage baseline within and in the vicinity of the Development not already covered in the 2005 Dersalloch ES (Ref. 11-3) and 2006 ES Addendum (Ref. 11-4);
 - Consider the Development site in terms of its archaeological and historic environment potential;
 - Assess the potential and predicted effects of the construction, operation and decommissioning of the revised Development layout on the baseline cultural heritage resource within the context of relevant legislation and planning policy guidelines;
 - Propose measures, where appropriate, to mitigate predicted significant adverse effects; and
 - Identify residual and cumulative effects.
3. The 2005 Dersalloch ES included a Cultural Heritage Assessment which was carried out in consultation with Historic Scotland and West of Scotland Archaeology Service (WoSAS). This chapter of the ES Addendum follows a methodology which takes into account the changes in legislation since 2005 and hence is slightly different in detail from that adopted by the 2005 Dersalloch ES. Effects on the settings of heritage assets are not addressed in this Addendum, as the sole concern expressed by Historic Scotland in respect of setting issues was over the effect on Craigengillan Designed Landscape, which is addressed in *Chapter 6: Landscape and Visual* of this ES Addendum.
4. Figure 11.1 depicts the Development site boundary, the layout of the Development and the locations of archaeological sites and monuments identified by the cultural heritage study within the Development site. Technical Appendix F1 of this ES Addendum provides a gazetteer of the cultural heritage sites and features within the Development site and an indication of the relative heritage value / sensitivity of each site. The layout of the Development has been designed to avoid archaeological constraints wherever possible and, as such, contains embedded mitigation.
5. The predicted direct effects on cultural heritage sites and features within the Development site, arising from construction activities, are identified and appropriate mitigation measures are proposed.
6. Cultural Heritage sites include historic environment features with both statutory and non-statutory designations as set out in Scottish Historic Environment Policy (SHEP) (Ref. 11-5) and recognised in Scottish Planning Policy (SPP) (Ref. 11-6).

11.2 Conclusions of the 2005 Environmental Statement and 2006 ES Addendum

11.2.1 2005 Dersalloch ES

7. A Cultural Heritage Assessment was produced for inclusion in the 2005 Dersalloch ES. The Cultural Heritage Assessment was carried out by Headland Archaeology in consultation with Historic Scotland and West of Scotland Archaeology Service (WoSAS). The numbering of cultural heritage features in the following paragraphs in this section (11.2) follows the Headland Archaeology numbering from the 2005 Dersalloch ES.
8. The assessment identified twenty cultural heritage features within the 2005 Windfarm site. These sites include the Scheduled Monument of Munteoch settlement and field system (HA 1); a possible building and huts at Gass (HA 2); a building, enclosure and huts at Gass (HA 3); a possible burnt mound (HA 4); Gass Farmstead (HA 5); Lochluie Farmstead (HA 6), Red Burn settlement (HA 7); Knockunter township and possible watermill (HA 8); Dersalloch settlement (HA 9); field banks (HA 10); three enclosures (HA 13, HA 15, HA 31); a quarry (HA 14); an enclosure and quarry scoops (HA 16); two cairns (HA 17, HA 19); a possible dun at Mote of Doonans (HA 33), a possible homestead (HA 34); and a settlement with rig and furrow cultivation (HA 53). It was considered that the potential for previously unrecorded sites to lie within the footprint of the 2005 Development site is low.
9. Direct effects were predicted on five sites located within the Windfarm site. These effects were:
 - A direct effect of minor significance on field banks (HA 10) due to construction works associated with turbines (T) T24 and T25, the excavation of Borrow Pits 4 and 10, and the construction of associated access tracks; and
 - Potential for direct effects of moderate significance on Lochluie farmstead (HA 6), Red Burn settlement (HA 7), Dersalloch farmstead (HA 9), and Trostan settlement (HA 53) in the event of accidental damage by contractors' plant operating in this area.
10. All direct and potential direct effects are to be mitigated through a programme of archaeological works approved in advance by WoSAS. This mitigation would offset the loss of the archaeological resource that would occur as a result of construction of the Development as designed in 2005, resulting in no significant residual effects. All effects were assessed as being of minor or negligible significance following mitigation.

11.2.2 2006 ES Addendum

11. The 2006 ES Addendum contained no additional information in relation to cultural heritage issues.

11.3 Assessment Methodology

12. Where methods relevant to this chapter have changed since submission of the 2005 Dersalloch ES, these are described below. Otherwise, methods used are the same as those described in Section 5.3 of the 2005 Dersalloch ES. Effects on the setting of heritage assets are not addressed in this section as the sole concern expressed by Historic Scotland with regard to setting issues was over the effect of the Development on the setting of Craigengillan Designed Landscape which is addressed in *Chapter 6: Landscape and Visual* of this ES Addendum.

11.3.1 Review of Changes to Legislation, Planning Policy and Guidance

11.3.1.1 Changes to Legislative Background

13. There have been no changes to cultural heritage legislation since the 2005-2006 submission.

11.3.1.2 Changes to Planning Policy Context

14. Planning policies (National, Regional and Local) pertinent to the Development are set out in *Chapter 5: Legal and Policy Framework* of this ES Addendum. Additional detail is provided in this section.
15. The current primary planning guidance comprises SHEP, SPP and Planning Advice Note (PAN) 2/2011: Archaeology and Planning (Ref. 11-7) at national level. These were not included in the 2005 Dersalloch ES as PAN 2/2011, SHEP and SPP have come into effect since the 2005 Dersalloch ES was produced.
16. Scotland's historic environment contributes to the Scottish Government's strategic objectives and targets of improving the state of Scotland's historic buildings, monuments and environment, and is identified as a national indicator and target under the National Performance Framework (Ref. 11-8). SHEP sets out Scottish Minister's policies for the historic environment, and provides policy direction for Historic Scotland and a framework that informs the day-to-day work of a range of organisations that have a role and interest in managing Scotland's historic environment. Through the implementation of the SHEP, Scottish Ministers wish to achieve three outcomes for Scotland's historic environment as follows:
 - That the historic environment is cared for, protected and enhanced for the benefit of our own and future generations;
 - To secure greater economic benefits from the historic environment; and
 - That the people of Scotland and visitors to our country value, understand and enjoy the historic environment.
17. SPP which replaced National Planning Policy Guidance (NPPG) 5 – Archaeology and Planning (Ref. 11-9) in Scotland in 2010 requires that planning authorities ensure that development plans provide a framework for the protection, conservation and enhancement of the historic environment to allow the assessment of the impact of proposed development on the historic environment and its setting (para. 112). SPP sets out statutory and non-statutory designated cultural heritage resources. Sites with statutory designations include Scheduled Monuments, Listed Buildings, Conservation Areas and Designated Wrecks. Sites with non-statutory designations include World Heritage Sites, Gardens and Designed Landscapes, Historic Battlefields and other Historic Environment Interests. Those relevant to this study are scheduled monuments, other archaeological and historic environment sites and features, and gardens and designed landscapes.
18. PAN 2/2011 which replaces PAN 42 (Ref. 11-10) advises that, in determining planning applications, planning authorities should take into account the relative importance of archaeological sites (para 5). It also notes that in determining planning applications that may impact on archaeological features or their setting, planning authorities may on occasion have to balance the benefits of development against the importance of archaeological features (para 6). The desirability of preserving a monument (whether scheduled or not) is a material consideration and the objective should be to assure the protection and enhancement of monuments by preservation *in situ*, in an appropriate setting. When preservation *in situ* is not possible, recording and/or excavation followed by analysis and publication of the results may be an acceptable alternative (para 14).
19. Since the production of the 2005 Dersalloch ES the Ayrshire Joint Structure Plan (2000) (Ref. 11-11) has been replaced by the Ayrshire Joint Structure Plan (approved 2007) (Ref. 11-12). The South Ayrshire Local Plan (Ref. 11-13) has been revised and adopted (2007).

Ayrshire Joint Structure Plan (2007)
20. Through Policy ENV6 development proposals considered to have an adverse effect on the following heritage resources shall not conform to the Structure Plan.
 - Listed Buildings of architectural and historic interest;

- Designated Conservation Areas
- Gardens and Designed Landscapes; and
- Archaeological locations and landscapes.

South Ayrshire Local Plan (2007)

21. Under Policy BE6 the Council will seek to protect scheduled ancient monuments, (including their settings) and archaeological sites and encourage sympathetic proposals for their promotion for educational or recreational purposes. Through Policy BE7, where the Council is convinced that the benefits of proposed development outweigh the benefits of preserving archaeology resources where known or considered likely to be present, the Council will ensure that provision is made by the Applicant for the proper excavation and recording of possible remains.
22. Policy BE8 states that proposals for appropriate alternative uses of country estate properties worthy of retention will normally be viewed favourably by the Council where:
 - a) Proposals preserve the landscape setting of the main house and associated buildings; and
 - b) Proposals preserve the character and appearance of the main house and associated buildings; and
 - c) The proposals preserve the integrity and setting of any recognised designed garden and reinstate/restore key elements of that garden wherever practicable
23. Cloncaird Castle is amongst those sites considered under this policy to be a Country Estate. The new Access Route site crosses the northern part of Cloncaird Castle non-inventory Designated Landscape (NIDL).

11.3.2 Consultation

24. Table 11.1 presents a summary of the key consultation responses that have been received following the submission of the 2006 ES Addendum. In its December 2006 response to the Addendum, Historic Scotland reiterated their view that there remained significant concerns regarding the impact of the proposed development on the Category A listed Craigengillan House and its candidate Designated Landscape. Historic Scotland remained of the view that the minimal changes do not alter the substantial adverse impact on Craigengillan. The effects of the Development on Craigengillan are addressed in *Chapter 6: Landscape and Visual* of this ES Addendum.
25. Historic Scotland was consulted by e-mail for their views on any potential concerns in respect of Scheduled Monuments, Listed Buildings, and Garden and Designed Landscapes in close proximity to the Development.
26. WoSAS was consulted by email seeking their views on the new Access Route and to acquire GIS data from the Sites and Monuments Record (SMR).

TABLE 11.1: CONSULTATION RESPONSES		
Consultee	Issue Raised	Response
Historic Scotland	In response to a consultation email (02/02/11), Historic Scotland stated that the new Access Route is not likely to raise significant issues as regards Historic Scotland's interests. Historic Scotland expects the addendum to be updated to reflect the changes to the wind farm layout.	No response required This ES Addendum reflects the changes to the Development.
WoSAS	In response to a consultation email	Delivery Route A has been selected as

TABLE 11.1: CONSULTATION RESPONSES		
Consultee	Issue Raised	Response
	<p>(07/02/11) WoSAS's preliminary assessment of the route options identifies Delivery Route A as potentially being the preferred option with regard to their interests.</p> <p>The changed windfarm layout raises no specific issues but WoSAS note that there is the potential for buried archaeological sites to survive within the Windfarm Area.</p>	<p>the 'new Access Route'.</p> <p>Mitigation has been adopted for areas of high potential.</p> <p>A Professional Archaeological Advisor will be appointed by the Applicant to provide ongoing advice regarding archaeological monitoring during the construction phase.</p>

11.3.3 Study Areas

27. The study area comprises two distinct parts:

- The Windfarm site, containing the turbines and main ancillary infrastructure (access tracks, substation, borrow pits etc.), which covers an area of rough pasture moorland and which was the subject of a full desk-based assessment and reconnaissance field survey; and
- The new Access Route. Previously recorded cultural heritage assets, as recorded by the NMRS and WoSAS SMR, within a 200 metre (m) corridor centred on the route were identified by the desk-based assessment. Field survey was limited to a 100 m study corridor centred on the new Access Route. The wider corridor for desk-based assessment was used to ensure that any sites whose extent may encroach into the 100 m wide study corridor were identified.

28. Figure 11.1 shows the revised Windfarm site layout and the locations of archaeological sites and features identified by the cultural heritage study. Technical Appendix F2 of this ES Addendum provides a gazetteer of these sites.

29. Figure 11.2 shows the new Access Route and the locations of archaeological sites and features identified by the cultural heritage study. A gazetteer of these sites is provided in Technical Appendix F1 of this ES Addendum.

11.3.4 Data Collection

11.3.4.1 Desk-based Assessment

30. The research has been based on readily available and relevant documentary sources. The following archives were referred to:

- Details of the locations and extents of Scheduled Monuments, Listed Buildings, Garden and Designed Landscapes, in GIS, were downloaded from Historic Scotland's Spatial Data Warehouse (Ref. 11-14);
- The National Monuments Record of Scotland (NMRS) via the online Pastmap resource (Ref. 11-15);
- The WoSAS Historic Environment Record (HER);
- The Aerial Photographic Collection of the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS);

- Ordnance Survey maps (1st and 2nd Editions) (Ref. 11-16 to 11-19 and pre-Ordnance Survey maps held in the Map Library of the National Library of Scotland (Ref. 11-20 to 11-26).

11.3.4.2 Reconnaissance Field Survey

31. A reconnaissance walkover survey was carried out between 17th and 19th January 2011 along the new Access Route. The aims of the survey were to:

- Locate all visible cultural heritage sites, monuments and features, within the 100m field survey corridor including those identified during the desk-based assessment and those previously unrecognised, and 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; and
- Inform the assessment of the possible direct effects of the Development on those features.

32. A reconnaissance walkover survey over the rest of the Windfarm site was carried out on 12th - 15th July 2011. The aims of this survey were to:

- Locate all visible cultural heritage sites, monuments and features, those previously identified by the Headland Archaeology's field survey, those identified during the additional desk-based assessment and those previously unidentified and unrecorded, and 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; and
- Inform the assessment of the possible effects of the Development on those features.

33. Cultural heritage site locations (and where appropriate their extents) were logged using a Mobile Mapper Global Positioning System (GPS) Navigation system (accurate to around +/- 10 m). Identified sites were recorded on pro-forma monument recording sheets and by digital photography. These archive materials will be offered to the WoSAS SMR following completion of the project.

34. No intrusive archaeological interventions have been carried out as part of this assessment.

11.3.5 Assessment of Significance

11.3.5.1 Significance Criteria

35. The significance of the effects of the construction of the Development is based on an assessment of both a determination of the heritage value/ sensitivity of the receptor and of the magnitude of the predicted effect. Criteria for assessing the heritage value / sensitivity of sites to direct effects are summarised below.

11.3.5.2 Criteria for Assessment of Direct Effects on Cultural Heritage Sites

36. The effects of the Development on cultural heritage assets were assessed on the basis of their type (direct), nature (beneficial, neutral or adverse), and longevity (reversible, short-term or long-term, irreversible or permanent). The assessment takes into account the heritage value / sensitivity of the receptor and the magnitude of the predicted effect. Mitigation measures designed to prevent, reduce or offset adverse effect are proposed, and residual effects have been assessed taking into account the likely effectiveness of the mitigation proposed.

37. The assessment of heritage value / sensitivity of archaeological and heritage assets reflects the relative weight which statute and policy attach to them; principally as published in SPP and SHEP. The level of heritage value assigned to a feature (and hence its sensitivity to change) can reflect a number of factors, including its potential as a resource of archaeological data, its

association with significant historical events, its role as a local landmark with cultural associations; and its aesthetic value.

38. Table 11.2 summarises the heritage value/ sensitivity of key cultural heritage resources, not all of which are relevant to this assessment. The heritage value / sensitivity assigned to cultural heritage resources is unchanged despite the changes in planning policy (see Section 11.3.1) since the preparation of the 2005 Dersalloch ES.

TABLE 11.12: HERITAGE VALUE / SENSITIVITY OF CULTURAL HERITAGE FEATURES	
Heritage Value / Sensitivity	Definition / Criteria
High	Sites of national or international importance, including: <ul style="list-style-type: none"> World Heritage Sites Scheduled Monuments, and sites proposed for scheduling Undesignated archaeological sites and areas of probable national importance identified in HERs/SMRs Category A Listed Buildings Outstanding Conservation Areas Inventory Garden and Designed Landscapes Inventory Status Battlefields
Medium	Sites of regional importance, including: <ul style="list-style-type: none"> Archaeological sites and areas of distinctive regional importance Archaeologically Sensitive Areas Category B Listed Buildings Conservation Areas
Low	Sites of local importance, including: <ul style="list-style-type: none"> Archaeological sites of local importance Category C(S) Listed Buildings Unlisted historic buildings and townscapes with local (vernacular) characteristics
Negligible	Sites of little or no importance, including: <ul style="list-style-type: none"> Sites of former archaeological features Unlisted buildings of minor historic or architectural interest Poorly preserved examples of particular types of feature

- 39.
- 11.3.5.3 Assessment of Physical (Direct) Effects**
40. Combined and cumulative effects occur from changes to the baseline current setting of the cultural heritage resource caused by the Development, in conjunction with other developments that occurred in the past, are proposed in the present or are likely to occur in the foreseeable future. Combined and cumulative physical effects are not considered within the assessment as other developments in the wider landscape cannot directly affect any cultural heritage assets within the Development site boundary.
41. Criteria for assessing magnitude of a physical (direct) effect, which measures the degree of change to the baseline condition of a feature that would result from the construction of one or more elements of the Development, are presented in Table 11.3.

TABLE 11.3: MAGNITUDE OF DIRECT EFFECTS	
Level of Magnitude	Definition
High	A fundamental material change to the baseline condition of the receptor, leading to total or major alteration of character.
Medium	A material, partial loss of one or more key elements of the site.
Low	Slight, detectable alteration of the baseline condition of the receptor.
Negligible	Very slight or negligible alteration from baseline conditions.

42. The heritage value / sensitivity of the receptor and the magnitude of the predicted effect are then used to inform the professional judgment of the likely significance of the physical effect. Table 11.4 summarises the criteria for assigning significance of a physical effect. Major and moderate effects are considered to be significant in terms of the EIA regulations.

TABLE 11.4: SIGNIFICANCE OF PHYSICAL EFFECTS				
Magnitude	Heritage Value / Sensitivity			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate/Minor	Minor	Negligible	Negligible
Imperceptible	Minor	Negligible	Negligible	Negligible

11.4 Review of Baseline Conditions

43. This section details all features of cultural heritage interest, both those features previously identified in the 2005 Dersalloch ES and 2006 Addendum, and those features identified during the production of this ES Addendum, firstly within the Windfarm site and secondly within a 200 m corridor centered on the new Access Route.
44. Numbers in brackets in the following text, refer to site numbers provided on Figures 11.1 and 11.2 and in Technical Appendices F1 and F2 of this ES Addendum.

11.4.1 Development Site

45. The NMRS and SMR contain records relating to six cultural heritage sites within the Windfarm site. These sites are: Redburn settlement (101), Dersalloch settlement (102), Knockhunter enclosures, township and watermill (103), Lochluie farmstead (104), Montaggan to Auldraigoch Road (123), and Munteoch farmstead (5200).
46. Examination of cartographic sources identified eight additional sites, including quarries (108-110), sheep rees (112, 113, 115 and 116) and a footbridge (114).
47. Examination of aerial photographs provided additional information on sites which had been identified from the NMRS, SMR and cartographic sources. Two further sites, areas of rig and furrow enclosed by field banks (118 and 119), were also identified.
48. Three sites were identified by the previous field survey carried out for the 2005 Dersalloch ES, these were two banks (105 and 106) and an area of settlement marked as Trostan on early cartographic sources (107). The 2011 field survey provided additional information on sites which had been identified by the desk-based assessment within the Windfarm site. Five additional sites were also identified by the 2011 field survey, a modern sheepfold (111), a quarry (117) and three lengths of head dyke (120 - 122).

11.4.2 Character of Cultural Heritage Remains

11.4.2.1 Medieval farmsteads, agrarian and settlement features

49. Six former farmsteads and areas of settlement were identified within the Windfarm site, and provide evidence of widespread cultivation of the land within the Windfarm site during the pre-improvement period.
50. Munteoch farmstead (5200) is located at the south eastern corner of the Windfarm site. It is first depicted on Pont's map (1580s), and is designated as a scheduled monument. Munteoch is therefore considered to be of high heritage value /sensitivity.
51. The former farmstead of Lochluie (104) is first depicted on Blaeu's map of 1654 (as Knockluy). A sheepfold currently stands at the site of the farmstead, its unusual rectangular shape suggests that it may have been constructed reusing the walls of the former farmhouse building. An extensive field system, and large areas of rig and furrow were recorded both from aerial photographs and during the field survey, to the north-east and north-west of the sheepfold. The site is considered to be of low value / sensitivity.
52. The settlement of Knockhunter (103) is represented by two turf-bank enclosures, a possible building platform, the remains of a building, and the remains of a possible horizontal watermill. The remains of the enclosures and buildings at Knockhunter are considered to be of low value / sensitivity. The remains of the possible horizontal watermill are considered to be of medium value / sensitivity.
53. An area of settlement and agrarian activity is located on Dersalloch Hill (102). The settlement is first depicted on Blaeu's map (1654), and comprises the remains of a building set within a sub-rectangular enclosure, and the remains of a turf-bank field system. The remains of this settlement on Dersalloch Hill are considered to be of low value / sensitivity.
54. The deserted settlement of Redburn (101) comprises the remains of seven shieling huts, several areas of unenclosed improved pasture, and a small quarry. The remains of the former settlement and field system at Redburn are considered to be of low value / sensitivity.
55. Three different lengths of head dyke (120, 212, and 122), two isolated lengths of field bank (105 and 106), two areas of rig and furrow cultivation (118 and 119) and an area of rig and furrow cultivation enclosed by a field bank (107) have been recorded within the site. The remains of all of these aspects of the pre-improvement agrarian landscape are considered to be of low value / sensitivity.
56. Although when considered individually the remains of the farmsteads and field systems at the southern end of the Windfarm site (102, 103, 104, 106, 107, 118, 119, 121, 122) are considered to be of low value / sensitivity, they form a group along with the Scheduled Monument of Munteoch farmstead (5200), which provides evidence of the former agrarian use of the landscape, and collectively could be considered to be of medium value / sensitivity. The Development has been designed to avoid the most important and best preserved parts of this historic landscape.

11.4.2.2 Miscellaneous Sites and Features

57. Four quarries were identified within the Windfarm site. Three of these (108 – 110) are likely to be related to the construction of a dry-stone wall which they lie in close proximity to, and the fourth (117) is thought to be related to the construction of the B741 road which it lies to the immediate south of. All four quarries are considered to be of negligible value and sensitivity.
58. Five sheepfolds were identified within the Windfarm site (111, 112, 113, 115 & 116). The remains of all five sheep folds are considered to be of negligible value / sensitivity and value.
59. A footbridge (114) is depicted crossing Red Burn on the First Edition Ordnance Survey Map, but could not be located during the field survey. The footbridge is considered to be of negligible value / sensitivity.

60. A road (123) is depicted on Thomson's map running northwest-wards, around the northern side of Dersalloch Hill and joining what is now the B741 to the west of Gass farmstead. The road is not depicted on later maps and no remains of it were discovered during the field survey. The road is considered to be of negligible heritage value / sensitivity.

11.4.3 Assessment of Archaeological Potential

61. The Historic Landscape Assessment (HLA) map (Ref. 11-27) indicates that the Windfarm site consisted primarily of rough grazing from the prehistoric period through to the present day. From the 20th century onwards some attempts to drain the landscape were made, resulting in localised areas of drained rough grazing land. An area of medieval and post-medieval settlement and agricultural land is indicated at the southeast corner of the Development site, around the former farmstead and Scheduled Monument of Munteoch.
62. The NMRS and SMR record other sites within the area, primarily related to agrarian activity. They also record a cairn (NS40SW25/ 14168) to the north of the site, and the site of a possible chambered cairn (NS40SW3/ 7195) to the south of the site, close to Baing Loch. The presence of these sites suggests that there is some possibility of previously unrecorded prehistoric remains being present within the Development site.
63. The available evidence of historic and current land-use of the Windfarm site suggests a low to moderate potential for, as yet undetected, buried remains of prehistoric sites, or for medieval or post-medieval sites relating to agrarian use of the landscape. Taking into consideration the limited land-take required by the separate elements of the Development infrastructure the probability of encountering hitherto undiscovered sites of archaeological significance during the course of the construction work is considered to be low.

11.4.4 New Access Route

64. The study area for assessing the potential for direct effects upon cultural heritage assets comprises a 100 m wide corridor from the centre of the new Access Route. Desk-based assessment collected information from the WoSAS SMR, historic cartographic sources, aerial photographs and other sources of information as listed above (Section 11.3.2) within a 200 m wide corridor centred on each route to ensure that any sites whose extent might extend within the 100 m study corridor would be identified. Field survey was restricted to the 100 m wide study corridor.
65. Ten cultural heritage assets have been recorded within 100 m of the new Access Route. The SMR contains records relating to two sites, Conclaird Castle Non-inventory Designed Landscape (NIDL) (1) and Bargenoch Bank disused cistern (2).
66. Examination of cartographic sources identified three additional sites, a gravel pit (3), House of the Hill (7) and two old Sandstone Quarries (8 and 10).
67. Examination of aerial photographs identified a building and enclosure (4) and provided additional information on sites identified on the SMR and cartographic sources.
68. Field survey provided additional information on those sites within the field survey area which had been identified from other sources. Field survey also recorded four additional sites, an area of rig and furrow cultivation (5), a field boundary (6), a field wall (9) and a quarry (10).

11.4.4.1 Character of Cultural Heritage Assets

- Medieval Sites
69. Cloncaird Castle NIDL (1) dates to around the 16th century and provides a setting for the castle. The NIDL is considered to be of medium value / sensitivity.
 70. Bargenoch Bank cistern (2) is associated with Cloncaird Castle and NIDL (1) though it is unclear whether it was a cistern forming part of the water system for the castle and NIDL or

whether it may have been an ice-house. The possible cistern is considered to be of negligible value / sensitivity.

Buildings

71. The remains of a building with a small enclosure to the south (4) were identified from aerial photographs, and were recorded during the field survey with only building footings, and sections of a thick concrete floor remaining. The remains of the building were located at the edge of a commercial forestry plantation. The remains of this building are considered to be of negligible value / sensitivity.
72. Further south along the route a single roofed building, House of the Hill (7), was marked on the First Edition Ordnance Survey map (Ref. 11-16), and was found to survive in good to fair condition within the commercial forestry plantation. It is considered to be of low value / sensitivity.

Miscellaneous Features

73. A sandstone quarry (8) and a gravel pit (3) were identified from cartographic sources. A further quarry now filled with modern stone clearance (10) was identified during the field survey. All of these remains are considered to be of negligible value / sensitivity.
74. Field survey recorded an area of rig and furrow cultivation (5), a disused turf field boundary (6), and the denuded remains of a field wall (9). These remains are all considered to be of negligible value / sensitivity.

11.4.4.2 Assessment of Archaeological Potential

75. The new Access Route lies primarily within an area of 20th century commercial forestry plantation. The area is shown as uncultivated land on Roy's Military Survey (1747-55) (Ref. 11-26) and as unimproved land on the First Edition Ordnance Survey map (Ref. 11-16). The HLA Map (Ref. 11-27) describes the area as comprising mainly 20th century coniferous plantation, with some areas of 18th and 19th century rectilinear fields.
76. Given the date and type of cultural heritage sites and features recorded within the study area along the route it is considered that the potential of as yet undetected, buried remains to survive along this route is low. Pre-afforestation deep ploughing will have caused substantial disturbance and destruction of underlying archaeology. Taking into account that the route will partially follow existing forestry tracks, and the limited land-take required by the route, it is considered that the probability of encountering hitherto undiscovered sites of archaeological significance during the course of the construction work is negligible within the areas of commercial forestry, and low elsewhere.

11.5 Assessment of Design Change Effects and Mitigation

77. The assessment of predicted effects has been carried out with reference to the Development layout shown in Figure 11.1.
78. The predicted direct effects on the cultural heritage sites and features identified by the study within the Windfarm site and the new Access Route are assessed using the criteria detailed in Tables 11.3 – 11.4 of this chapter.

11.5.1 Construction

11.5.1.1 Windfarm Site: Construction Assessment

79. The Development layout has been designed in order to avoid cultural heritage features where possible, and as such the layout contains mitigation by design. Despite this, six cultural

heritage sites within the Windfarm site are predicted to receive direct physical effects as a result of the construction of the Development.

80. A direct effect is predicted on the southernmost part of Redburn settlement (101), an area of improved land, part of a larger relict field system, due to the construction of the control building/substation compound and temporary construction compound. Although no upstanding features of the field system survive in this southernmost part of the site, there is the potential for ground breaking works for the access track to disturb any buried remains or associated features that may survive. If buried remains survive then the direct impact would be of low magnitude, resulting in an effect of negligible significance. Mitigation through a watching brief would offset the predicted impact, through the identification and recording of any surviving remains prior to their loss.
81. A direct effect is predicted on Dersalloch settlement (102) by the construction of T19 and T20 and the access tracks leading to them, which would affect the eastern and south western extremities of the relict field system, respectively. Only a small part of the field system would be affected by the construction of the turbines and associated access tracks. There is also the potential for ground breaking works for the access tracks to disturb any buried remains or associated features which may survive. The predicted direct effect on the Dersalloch field system is therefore considered to be of unknown but no more than low magnitude and of negligible significance. Mitigation through trial trench evaluation and watching briefs would offset the predicted effect through the recording of the surviving upstanding field banks and any buried remains prior to their loss.
82. A direct effect is predicted on field bank (105) from the construction of the access track. The field bank survives in poor condition as fragmentary remains and is considered to be of negligible value / sensitivity. The groundworks associated with the construction of the access track will affect only a small portion of the recorded field bank, and predicted direct effect is therefore considered to be of low magnitude and negligible significance. As the field bank is of negligible heritage value no further mitigation is required.
83. A direct effect is predicted on field bank (106) from the construction of the access track. The field bank is considered to be of low value / sensitivity, and the construction works will affect only a small part of the field bank. The predicted direct effect upon field bank (106) is therefore considered to be of low magnitude resulting in a direct effect of negligible significance. Mitigation through trial trench evaluation would offset the predicted effect through the recording of the surviving field bank prior to construction.
84. A direct effect is predicted on head dyke (120) from the excavation of Borrow Pit 5. The head dyke survives in good condition and is considered to be of low value / sensitivity. The excavation of Borrow Pit 5 will result in a medium magnitude direct effect resulting in an effect of minor significance. Mitigation through trial trench evaluation would offset the predicted effect through the recording of the affected section prior to construction work commencing.
85. A direct effect is predicted on quarry (14) due to the excavation of Borrow Pit 13. The quarry is considered to be of negligible value / sensitivity. It would receive a direct effect of high magnitude resulting in an overall direct effect of minor significance as a result of the excavation of the borrow pit. No mitigation is required in respect of the effect on this feature.
86. Borrow Pit 24 will be located in close proximity to head dyke (122) and there is the potential for a direct effect to be caused by construction activities in the vicinity. Head dyke (122) is considered to be of low value/ sensitivity, and the low magnitude direct effect would result in an effect of negligible significance. Mitigation through marking out would offset the predicted effect ensuring the preservation of the site *in situ*.
- #### 11.5.1.2 Windfarm Site: Mitigation
87. A Professional Archaeological Advisor will be appointed by the Applicant to provide ongoing advice regarding archaeological monitoring during the construction phase.

88. Except where otherwise stated 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 analyses 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 South Ayrshire Council (who will take advice from WoSAS).

Preservation in Situ

89. Mitigation measures were incorporated into the design of the Development as they were agreed in order to avoid direct effects on important archaeological sites. As a result there are limited locations (as described above) where components of the Development intersect features of archaeological or historic environment interest.

90. Where features lie in close proximity to Development infrastructure they will be avoided as far as practical to ensure their preservation in situ. Where appropriate, sites will be either entirely fenced off or visibly marked-out to prevent accidental damage occurring to the remains during construction activities in the vicinity. The temporary demarcation would be hi-visibility and placed at a minimum of 5 m from the visible extent of the feature and facing the working area.

91. Disturbance to field bank (105) where it is crossed by the access track will be kept to a minimum.

92. Head dyke (122) will be visibly marked out to ensure its preservation *in situ*.

Evaluations and Watching Briefs

93. Any requirements for archaeological mitigation through pre-construction trial trench evaluation or construction phase monitoring of works through watching briefs will be agreed in consultation with South Ayrshire Council (who will take advice from WoSAS). Site mitigation work may be required along access tracks and at turbine locations, for example. Where there is a possibility that construction activities may encounter buried remains of former sites, a watching brief would be carried out. A Professional Archaeological Advisor will be appointed to undertake monitoring works in sensitive areas, as approved by South Ayrshire Council (who will take advice from WoSAS).

Evaluations

94. A sample excavation will be carried out on the remains of field banks forming part of Dersalloch settlement (102) where they will be affected by the construction of T19 and T20.

95. A sample excavation will be carried out at the location where the construction of T24 will impact upon field bank (106).

96. A sample excavation will be carried out through the location where the excavation of Borrow Pit 5 will have a direct effect upon head dyke (120).

Watching Briefs

97. A watching brief will be carried out during ground breaking required during the construction of, the control building/substation compound, the temporary construction compound and the access track as it passes Redburn settlement (101).

98. A watching brief will be carried out during any ground-breaking required during the construction of the access track as it leads to and from T20, in order to record any buried remains associated with Dersalloch settlement and field system (102).

Post-Excavation

99. 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 would indicate the consequent production of written reports on the findings, with post-excavation analyses and publications of the results of the works, where appropriate.

Construction Guidelines

100. Written Guidelines would 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.

11.5.1.3 New Access Route: Construction Assessment

101. The new Access Route has been designed in order to avoid cultural heritage features where possible, and as such the layout contains mitigation by design. Where possible the route follows existing tracks minimising the potential direct effects of the construction of the route. Despite this, three cultural heritage sites are predicted to receive direct effects as a result of the construction of the new Access Route.

102. A direct effect is predicted on Cloncaird NIDL (1). Cloncaird NIDL is considered to be of medium value / sensitivity. Construction works will have an effect only on the outer policies of Cloncaird NIDL. The route has been specifically designed to follow existing track where possible, and to follow field boundaries and the edge of forestry generally, in order to minimise visual effects. The route passes close to the remains of a building and enclosure (4) within the NIDL and there is the potential for direct effects upon the site as a result of construction activities in the vicinity. The building and enclosure survive only as footings, and are considered to be of negligible heritage value / sensitivity. Mitigation through marking out will ensure the preservation of the site *in situ*.

11.5.1.4 New Access Route: Mitigation

103. A Professional Archaeological Advisor will be appointed by the Applicant to provide ongoing advice regarding archaeological monitoring during the construction phase.

104. Except where otherwise stated 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 analyses and dissemination of the results of the mitigation works, as well as for archiving of the project materials and records. The WSI would be subject to the approval of South Ayrshire Council (who will take advice from WoSAS), prior to the commencement of development.

Preservation in situ

105. Where features lie in close proximity to Development infrastructure they will be avoided as far as practical to ensure their preservation *in situ*. Where appropriate, sites will be either entirely fenced off or visibly marked-out to prevent accidental damage occurring to the remains during construction activities in the vicinity. The temporary demarcation would be hi-visibility and placed at a minimum of 5 m from the visible extent of the feature and facing the working area.

106. Building and Enclosure (4) which lies to the immediate north of the new Access Route will be visibly marked out to ensure its preservation *in situ*.

Evaluations and Watching briefs

107. Any requirements for archaeological mitigation through pre-construction trial trench evaluation or construction phase monitoring of works through watching briefs will be agreed in consultation

with South Ayrshire Council (who will take advice from WoSAS). Site mitigation work may be required along the new Access Route. Where there is a possibility that construction activities may encounter buried remains of former sites, a watching brief will be carried out. A Professional Archaeological Advisor will be appointed to undertake monitoring works in sensitive areas, which will be identified in consultation with South Ayrshire Council (who will take advice from WoSAS).

Post-Excavation

108. 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 would indicate the consequent production of written reports on the findings, with post-excavation analyses and publications of the results of the works, where appropriate.

Construction Guidelines

109. Written Guidelines would 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.

11.5.2 Decommissioning Effects

110. No significant effects are predicted during the decommissioning of the Development, presuming that the same track infrastructure is used for the dismantling and removal of the built features of the Development as described in *Chapter 4: Project Description* of this ES Addendum.

11.5.3 Residual Effects Assessment and Conclusions of Design Changes

111. Predicted direct effects on cultural heritage assets have been identified by the study and mitigation measures are proposed in order to offset those effects. Taking the proposed mitigation into account, the residual effects of the Development would be the loss of some physical elements of the current historic landscape, offset by the recovery of archaeological information.
112. Ground-disturbing excavations associated with the construction of the Development could have a direct effect on any hitherto undiscovered, buried archaeological remains present in affected areas. However, taking into account the limited extent of the proposed ground disturbance generated by the construction of access tracks, cable routes, turbine bases, hardstanding areas, construction compound and control building, the likelihood of encountering remains of archaeological significance is considered to be low.

11.5.4 Summary of Effects

TABLE 12.5: SUMMARY OF EFFECTS AFTER MITIGATION				
Aspect	Description	Nature of Effect	Geographic Scale	Significance
Construction of control building/substation compound, and temporary construction compound	A direct effect on part of the field system of Redburn settlement (101)	Adverse Permanent	Local	Negligible
Construction of T19 and T20 and access tracks leading to them	A direct effect on eastern and south-western extremities of the field system at Dersalloch settlement (102)	Adverse Permanent	Local	Negligible

TABLE 12.5: SUMMARY OF EFFECTS AFTER MITIGATION				
Construction of the windfarm access track	A direct effect on field bank (105)	Adverse Permanent	Local	Negligible
Construction of T 24	A direct effect on field bank (106)	Adverse Permanent	Local	Negligible
Excavation of Borrow Pit 5	A direct effect on head dyke (120)	Adverse Permanent	Local	Negligible
Excavation of Borrow Pit 13	A direct effect on quarry (14)	Adverse Permanent	Local	Negligible
Construction of new Access Route	A possible direct effect on building and enclosure (4) in Cloncaird NIDL	Adverse Permanent	Local	Negligible

11.6 Statement of Significance

113. A desk-based assessment and reconnaissance walkover survey has been carried out for the Development. The assessment has been informed by comments and information supplied by Historic Scotland and WoSAS.
114. Thirty-seven cultural heritage sites in total have been identified within the Development site with ten cultural heritage sites identified along a narrow corridor centered on the new Access Route.
115. An assessment of the known cultural heritage sites within the Development site and surrounding area indicates that there is a moderate to low potential for encountering previously unknown sites of archaeological interest within the Windfarm site. The potential for encountering previously unknown sites of archaeological interest along the new Access Route is considered to be low, and negligible within those areas which are occupied by commercial forestry.
116. Six direct effects are predicted for cultural heritage sites and features identified within the Windfarm site. Effects of minor significance have been predicted upon one site, head dyke (120). All of the other effects are of negligible significance. These direct effects will be offset by mitigation. After this mitigation the effects are of **negligible** significance.
117. One possible direct effect of minor significance is predicted on the building and enclosure (4) for cultural heritage sites and features identified within the study corridor centred on the new Access Route. This effect can be offset by mitigation. After this mitigation the effects are of **negligible** significance.

11.7 References

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Ref. 11-2 Institute for Archaeologists (2009). *Standard and Guidance for Archaeologists: Desk-based Assessment*. Institute for Archaeologists

Ref. 11-3 RPS (2005). *Dersalloch Windfarm Environmental Statement (April 2005)*. ScottishPower Renewables (UK) Ltd, Glasgow

Ref. 11-4 RPS (2006). *Dersalloch Windfarm Environmental Statement Addendum (November 2006)*. ScottishPower Renewables (UK) Ltd, Glasgow.

Ref. 11-5 Historic Scotland (2011). *Scottish Historic Environment Policy*. Historic Scotland, Edinburgh

Ref. 11-6 Scottish Government (2010). *Scottish Planning Policy*. OPSI, Edinburgh

Ref. 11-7 Scottish Government (2011). *Planning Advice Note (PAN) 2/2011: Planning and Archaeology*. Office of Public Sector Information (OPSI), Edinburgh.

Ref. 11-8 Scottish Government (2007). *Scottish Budget Spending Review 2007*. OPSI, Edinburgh

- Ref. 11-9 Scottish Government (1998). *National Planning Policy Guideline (NPPG) 5: Archaeology and Planning*. OPSI, Edinburgh
- Ref. 11-10 Scottish Government (1994). *Planning Advice Note PAN 42: the Planning Process and Scheduled Monument Procedures*. OPSI, Edinburgh
- Ref. 11-11 Ayrshire Joint Planning Steering Group (2000). *Ayrshire Joint Structure Plan (2000)*. Ayrshire Joint Planning Steering Group
- Ref. 11-12 Ayrshire Joint Planning Steering Group (approved 2007). *Ayrshire Joint Structure Plan (Approved 2007)*. Ayrshire Joint Planning Steering Group
- Ref. 11-13 South Ayrshire Council (2007). *South Ayrshire Local Plan 2007*. South Ayrshire Council. Ayrshire Joint Planning Steering Group
- Ref. 11-14 Historic Scotland (2011), Data Services <http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2000:10:0>:
- Ref. 11-15 Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) Pastmap website: <http://jura.rcahms.gov.uk/PASTMAP/start.jsp>
- Ref. 11-16 Ordnance Survey (OS) (1859). 1st Edition *Ayrshire* sheet XLV six inches to one mile.
- Ref. 11-17 OS (1860). 1st Edition *Ayrshire* sheet XLVI six inches to one mile. OS
- Ref. 11-18 OS (1897). 2nd Edition *Ayrshire* sheet XLV SW six inches to one mile. OS
- Ref. 11-19 OS (1897). 2nd Edition *Ayrshire* sheet XLVI SE six inches to one mile. OS
- Ref. 11-20 Thomson, J. (1828) *Northern Part of Ayrshire, Southern Part*. J. Thomson & Co., 1820. Edinburgh.
- Ref. 11-21 Ainslie, J. (1821) *Ainslie's Map of the Southern Part of Scotland*. Macreadie Skelly & Co., 1821. Edinburgh.
- Ref. 11-22 Armstrong, A. (1775) *A new map of Ayrshire*. S.I. : s.n., 1775
- Ref. 11-23 Moll, H. (1745) *The South Part of the Shire of Air; Containing Kyle and Carrick*. Bowles and Bowles, 1745. London.
- Ref. 11-24 Adair, J. (1685) *A mape of the west of Scotland containing Clydsdail, Nithsdail, Ranfrew, Shyre of Ayre, & Galloway authore Jo. Adair*. Adair, manuscript 1685
- Ref. 11-25 Gordon, R. (ca.1636-1652) *Cunningham. From Irvine to the head of the Solway*. Gordon, manuscript ca. 1636-52.
- Ref. 11-26 Roy, W. (1747-55) *Military Survey of Scotland*. British Library
- Ref. 11-27 RCAHMS Historic Landuse Assessment map. <http://hla.rcahms.gov.uk>

AERIAL PHOTOGRAPHS			
	3125-3127 3137-3135 4111-4112		
58/1414	F22 0078-0084	20/4/54	1:10000

AERIAL PHOTOGRAPHS			
Sortie	Frames	Date	Scale
106G/UK/0090	4071-4073 4141-4143 4213-4223	12/5/46	1:10000
CPE/UK/0307	4115-4127 3115-3123	4/10/47	1:10000
540/0954	3106-3135	28/11/52	1:10000

APPENDIX F: Archaeology and Cultural Heritage

APPENDIX F1: Cultural Heritage Sites and Features within the Windfarm Site

TABLE F1.1: CULTURAL HERITAGE SITES AND FEATURES WITHIN THE WINDFARM SITE										
Site No	Site Name/type	Easting	Northing	NMRS No / SMR No	Source	Site description	Sensitivity	Effect Type	Effect Magnitude	Significance of Effect
101	Red Burn settlement	24319	60599	NS40NW 18 / WoSASPIN 7147	NMRS; SMR; Aerial photographs; Field survey	<p>The NMRS and SMR record an area of depopulation extending over some 2 hectares (ha) of rough pasture above the west bank of the Red Burn at approximately 270 metres (m) above ordnance datum (AOD). The settlement comprises about ten turf-walled, rectangular structures ranging from about 11m by 5 m to small shieling-like units 5 m by 3 m. The site is visible on RAF Aerial Photographs (Ref F-1).</p> <p>Several linear banks, enclosures and an area of rig and furrow are visible on modern aerial photographs.</p> <p>Field survey located the remains of seven shieling huts, including one which appeared to be a double-compartment building, surviving in fair condition as turf-covered banks. The best preserved example survived as banks a maximum of 1 m wide and 0.6 m high, while the most poorly preserved survived in a collapsed state at a width of 0.8 m and a height of 0.2 m. The field survey also located an area of improved land, not enclosed by banks, but visible from the hillside above as a change in vegetation. At the north western area of the settlement an area of quarrying was identified, with the quarry having been dug to a maximum depth of 3 m.</p>	Low	Direct	Low	Negligible
102	Dersalloch settlement	24246	60420	WoSASpin 53083	SMR, Field survey	<p>A previous field survey (Headland, 2005) identified a settlement depicted on Blaeu's map (Ref. F-2) northwest of 'Knockluy'. The settlement is not annotated or depicted on later maps. The visible remains recorded by the survey include the stone footings for a rectangular building measuring 14 m by 5 m and upstanding to 0.5 m high immediately adjacent to a more recent sheep ree (112). A sub-rectangular turf banked enclosure, enclosing an area 116 m x 80 m was identified to the northwest. All the features were located on a natural terrace.</p> <p>An extensive area of enclosures, field systems and banks can be seen on modern aerial photography in the immediate area.</p> <p>Field survey identified the building footings which were as previously described by the previous survey, and the enclosure, surviving as a turf-bank a maximum of 1.5 m wide and 0.4 m high. The north-eastern side of the enclosure is less well preserved, and appears to have been trampled by sheep. The previously recorded additional enclosure to the north-west was also located surviving as a turf-covered bank a maximum of 1 m high and 1.2 m wide.</p>	Low	Direct	Low	Negligible
103	Knockhunter, enclosures, township, watermill	24180/ 24182	60332/ 60328	NS40SW 17 / WoSASpin 7190 and NS40SW 22 / WoSASpin 14175	NMRS; SMR; Field survey; Aerial Photography	<p>The NMRS and SMR record that two curvilinear turf banked enclosures, visible on aerial photographs (Ref. F-3), are extant stock enclosures (NS40SW 17/ WoSASpin 7190).</p> <p>Field survey identified the two enclosures. The northern example survives as a turf covered bank a maximum of 1 m high and approximately 1.5 m wide, and was found to be semi-circular in form. The southern enclosure was also of a semi-circular form and survived to a maximum of 1.5 m in height. It lies at the centre of</p>	Low/ Medium	None	n/a	n/a

TABLE F1.1: CULTURAL HERITAGE SITES AND FEATURES WITHIN THE WINDFARM SITE

						<p>a series of banks forming a field system which is partially visible on modern aerial photography. A number of small pens are located in the southern part of the area and the banks might therefore be best understood as a complex system of stock enclosures. At the southern side of the banks a possible platform for a sheiling was recorded. To the east of the system of banks an additional sheiling was also recorded.</p> <p>The NMRS and SMR also record a settlement and possible horizontal mill (NS40SW 22/ WoSASpin 14175). The remains of the mill were recorded during the field survey. A building surviving as a series of turf-covered walls a maximum of 2.5 m in width and enclosed by a turf bank to the west was recorded. To the east of the building as an additional stone built platform measuring 2 m x 5.5 m and approximately 0.4 m high. A possible dam was evident within the stream (at 241825 603281). An additional building platform was evident to the north, surviving as a vague terraced area cut into the hill slope.</p>				
104	Lochluie, farmstead	24258	60323	NS40SW 13 / WoSASpin 7186	NMRS; SMR, Field survey	<p>The NMRS and SMR record the farmhouse of Lochluie. A sheepfold is also noted to stand on the site of the farmstead, with extensive traces of rig and furrow in the surrounding area.</p> <p>The farmstead is depicted on the maps of Blaeu (Ref. F-2), Armstrong (Ref. F-4) and Thomson (Ref. F-5). A farmstead comprising one unroofed building is depicted on the Ordnance Survey 1st Edition map (Ref. F-6) and on subsequent editions. A previous DBA (Ref. F-7) noted rig and enclosures visible on aerial photographs (Ref. F-8)</p> <p>An extensive field system of banks, enclosures and areas of rig and furrow (105) is visible on modern aerial photography (Ref. F-9) to the north of the farmstead.</p> <p>Field survey found that this field system survived in varying condition, from boundaries which were not visible on the ground to banks of a maximum of 2.5 m width and 1.5 m height. The sheepfold mentioned in the NRMS/SMR entries was located and due to its unusual rectangular shape it was thought possible that the sheepfold had been constructed reusing the remains of the walls of the former farmhouse building.</p>	Low	None	n/a	n/a
105	Banks	24070	604940	n/a	Headland, 2005, Field survey	<p>A previous study (Ref. F-7) identified three lengths of bank, two of which are outwith the Development site boundary.</p> <p>Field survey was unable to identify the bank within the survey area due to high vegetation. An additional bank was identified further to the south, which ran intermittently for a distance of approximately 30 m and was a maximum of 2 m in width and 1.1 m in height.</p>	Negligible	Direct	Low	Negligible
106	Banks	242450	603830	n/a	Headland, 2005, Field survey	<p>A previous study (Ref. F-7) identified three lengths of bank to the south of Dersalloch Hill.</p> <p>A field system comprising of banks, rig and furrow and possible enclosures is visible on modern aerial photography (Ref. F-9) to the north of the features previously described; two of the banks appear to connect to form a longer land boundary bank.</p> <p>Field survey identified these banks surviving in a range conditions, ranging from some banks which were indistinguishable on the ground, to those which survived</p>	Low	Direct	Low	Negligible

TABLE F1.1: CULTURAL HERITAGE SITES AND FEATURES WITHIN THE WINDFARM SITE										
						to a maximum height of approximately 0.8 m and 1.5 m in width.				
107	Settlement; rig and furrow	24014	60227	n/a	Headland, 2005, Field survey	A previous study (Ref. F-7) identified a settlement annotated as 'Trostan' depicted on maps by Blaeu (Ref. F-2), Roy (Ref. F-10) and Thomson (Ref. F-5). Approximately 1 ha of rig and furrow was also identified on aerial photographs (Ref. F-11) and which probably relate to the settlement. Field survey found the banks surviving to a maximum height of 1.3 m and maximum width of 2.5 m. The field system extended out of the survey area to the south.	Low	None	n/a	n/a
108	Quarry	241178	604696	n/a	Historic maps, Field survey	A whinstone quarry is depicted on the Ordnance Survey 1 st (Ref. F-6) 2 nd Edition (Ref. F-12) and 1911 (Ref. F-13) Edition maps. Field survey recorded the quarry which was 26 m x 13 m and a maximum of 3.5 m deep, and was presumed to have been used for the construction of the dry-stone wall which lies to the immediate east.	Negligible	None	n/a	n/a
109	Quarry	241262	604364	n/a	Historic maps, Field survey	A whinstone quarry is depicted on the Ordnance Survey 1 st (Ref. F-6), 2 nd Edition (Ref. F-12) and 1911 (Ref. F-13) Edition maps. Field survey identified the sub-circular quarry, approximately 17 m in diameter, which has been quarried to a maximum depth of 3.5 m. The quarrying was assumed to have been carried out to enable the construction of the dry-stone wall which lies to the immediate east.	Negligible	None	n/a	n/a
110	Quarry	241277	604110	n/a	Historic maps, Field survey	A whinstone quarry is depicted on the Ordnance Survey 1 st (Ref. F-6), 2 nd Edition (Ref. F-12) and 1911 (Ref. F-13) Edition maps. Field survey located the quarry which comprised two adjacent areas which were sub-rectangular in form and which had been quarried to a maximum depth of 2.5 m. Each area of quarrying was approximately 40 m x 10 m. The quarrying was assumed to have been carried out to allow the construction of the dry-stone wall which runs between two adjacent areas of quarrying.	Negligible	None	n/a	n/a
111	Sheepfold (modern)	241616	604258	n/a	Field survey	Field survey identified the remains of a collapsed modern sheep pen, all that remained were some corrugated iron, sheep netting, two wooden frames (apparently re-used window frames) and an upstanding fence post.	Negligible	None	n/a	n/a
112	Sheep Ree	242456	604206	n/a	Historic maps; Aerial photographs, Field survey	A sub-circular sheep ree is depicted and annotated on the Ordnance Survey 1 st Edition map (1859), on the northeast side of Dersalloch Hill. It is not depicted on subsequent Ordnance Survey maps. A circular bank is visible on modern aerial photography. The remains are likely to be part of the more extensive settlement of Dersalloch (102). Field survey identified the remains of sheep ree which survived in good condition. The sheep ree was of dry-stone wall construction with some internal structures constructed of corrugated iron present, and measured approximately 11.5 m in diameter. The entrance was at the southern side, and the walls survived to a maximum height of approximately 1 m.	Negligible	None	n/a	n/a
113	Sheep Ree	242766	604188	n/a	Historic maps; Aerial photographs, Field survey	A sub-circular sheep ree is depicted and annotated on the Ordnance Survey 1 st Edition map (Ref. F-14) to the northeast of Dersalloch Hill. It is not depicted on subsequent editions of the Ordnance Survey.	Negligible	None	n/a	n/a

TABLE F1.1: CULTURAL HERITAGE SITES AND FEATURES WITHIN THE WINDFARM SITE										
						A circular bank is visible on modern aerial photography. The remains are likely to be part of the more extensive settlement of Dersaloch (102). Field survey found the sheep ree survives in good condition, it is of dry-stone wall construction and survives to its full height of c.1 m, and measures approximately 15 m in diameter.				
114	Footbridge	243159	606182	n/a	Historic maps, Field survey	A footbridge is depicted crossing the Red Burn to the north of Red Burn settlement (101) on the Ordnance Survey First Edition Map (Ref. F-6). Field survey was not able to locate the footbridge.	Negligible	None	n/a	n/a
115	Sheep Ree	241979	603283	n/a	Historic maps; Aerial photographs, Field survey	A circular sheep ree is annotated on the Ordnance Survey 1 st Edition map (Ref. F-14) but is not depicted on subsequent maps. It is visible on modern aerial photography. Field survey located the sheep ree surviving in good condition. The sheep ree is of dry-stone wall construction, with walls approximately 1.2 m high and 1.3 m wide, and measures approximately 13 m in diameter.	Negligible	None	n/a	n/a
116	Sheep Ree	243215	605972	n/a	Historic maps; Aerial photographs, Field survey	A circular sheep ree is annotated and depicted to the south of Red Burn settlement (101) on the Ordnance Survey 1 st Edition map (Ref. F-6) and is annotated on the 1911 Edition (Ref. F-13) map as 'Old Sheepfold'. A circular stone structure is visible on modern aerial photography. Field survey identified the sheep ree surviving in a collapsed condition. The walls are of dry-stone construction and survive to a maximum height of 0.8 m. The sheep ree's entrance is at the north-north-west, and it measures approximately 17 m in diameter.	Negligible	None	n/a	n/a
117	Quarry	243106	606068	n/a	Field survey	Field survey identified an area of quarrying cut into the hillside, which appeared to have an entrance and exit at the north-east and north-west sides. The quarry was excavated to a maximum depth of 3 m, and was presumably used during construction of the road which lies to the north.	Negligible	None	n/a	n/a
118	Rig and bank	242694	604155	n/a	Aerial photographs Field survey	An area of rig and furrow, enclosed by a field bank is visible on modern aerial photography. Field survey was unable to identify these features on the ground due to high vegetation.	Low	None	n/a	n/a
119	Rig and bank	241496	603107	n/a	Aerial photographs, Field survey	A series of banks and an area of rig are visible to the southeast of Knockunter on modern aerial photography. Field survey failed to identify these remains due to high vegetation.	Low	None	n/a	n/a
120	Head dyke	241645	603463	n/a	Field survey; Aerial photographs	Field survey identified the head dyke which was a maximum of 1.2 m in height and 2 m wide. A head-dyke is visible on modern aerial photography.	Low	Direct	Medium	Minor
121	Head dyke	240992	603043	n/a	Field survey; Aerial photographs	Field survey identified the head dyke which was a maximum of 1.2 m in height and 2 m wide. A head-dyke is visible on modern aerial photography.	Low	None	n/a	n/a
122	Head dyke	242529	603722	n/a	Field survey; Aerial	Field survey located the head dyke which survives to a maximum height of 0.6 m	Low	Direct	Low	Negligible

TABLE F1.1: CULTURAL HERITAGE SITES AND FEATURES WITHIN THE WINDFARM SITE										
					photographs	and 1.2 m wide. A head dyke is visible on modern aerial photography				
123	Montaggan to Auld craigoch, road	24379	60371	WoSASpin 53085	SMR; Historic maps;	The SMR records a road running between Montaggan and Auld craigoch via Munteoch shown on Thomson's map (Ref. F-5). The road is not shown on subsequent maps. Thomson's map shows the road running from Munteoch northwestwards, around the north side of Dersalloch Hill and joining the Dalmellington to Straiton road west of Gass farmstead. The road does not appear on later, Ordnance Survey, maps.	Negligible	None	n/a	n/a
124	Old Quarry (Whinstone)	24094	60552	n/a	Historic maps; Field survey	An old whinstone quarry is depicted and annotated on the Ordnance Survey 1 st Edition (Ref. F-14) and 2 nd Edition (Ref. F-15) maps. Field survey recorded that the quarry, which now survives as a grassy depression, measures 15m long by 9m wide and is 1m deep (max). The quarry has been partially infilled with stones resulting from field clearance.	Negligible	None	n/a	n/a
125	Old Quarries (whinstone)	243000	606070	n/a	Historical maps; Aerial photographs	Three quarries annotated 'Old Quarries (whinstone)' are depicted on the Ordnance Survey 1 st (Ref. F-14) and 2 nd (Ref. F-15) Edition maps. An area of quarrying is visible on aerial photographs dating to 1947. This site was not visited during the field survey as it lies outside the field survey area.	Negligible	None	n/a	n/a
126	Field boundary	241152	605066	WoSASpin 53489	Field survey	Field survey identified the denuded remains of a curvilinear turf and stone field bank which crosses an area of rough pasture moorland on the southwest slopes of Cairn Hill. The bank is 4 m wide and 0.75 m wide and extends outside the survey corridor. It follows a natural contour running northwest to southeast across the hill slope and then curves to the north, running towards Gass Farmstead, and continues along the western edge of an unnamed burn.	Negligible	None	n/a	n/a
5200	Munteoch, farmstead	24385	60369	NS40SW 15 / WoSASpin 7188	NMRS; SMR	The NMRS and SMR record that the remains of Munteoch farmstead comprise a rectangular building (upon which a modern sheepfold has been constructed) with a rectangular enclosure attached to its ESE side; rig-and-furrow cultivation extends over about 17ha of the surrounding area. By 1856 the farmstead had become ' <i>much dilapidated</i> ' and was in use as a byre (Ref. F-16). A farmstead of this name is recorded on the maps of Blaeu (Ref. F-2), Armstrong (Ref. F-4) and Thomson (Ref. F-5). An archaeological survey of an area of about 45 ha of land in the vicinity of Munteoch farmstead was carried out in advance of afforestation in 1988 (Ref. F-17). The survey revealed a series of substantial earthen field banks which define a pre-enclosure agricultural settlement comprising of at least three separate house sites with associated yards, ancillary buildings and field systems containing pronounced rig and furrow and lazybeds. The arrangement of the houses and their associated land strongly suggests that some of the features at Munteoch date back to medieval times. Munteoch is depicted and annotated as 'Mountenoch' on Ainslie's map (Ref. F-18) and the Ordnance Survey 1 st Edition map (Ref. F-14) depicts a rectangular, roofed building with a small compartment on the southwest side and an enclosure on the ESE side. A well is depicted by the burn to the north. The 2nd Edition (Ref. F-15)	High	None	n/a	n/a

TABLE F1.1: CULTURAL HERITAGE SITES AND FEATURES WITHIN THE WINDFARM SITE										
						<p>and 1911 Edition (Ref. F-19) Ordnance Survey maps depict Munteoch as an unroofed double compartment building with an associated enclosure; the well is also shown. An unroofed, two-compartment building is depicted on the 1977 (Ref. F-20) Ordnance Survey map.</p> <p>The site is a scheduled monument (Index No. 5200)</p>				

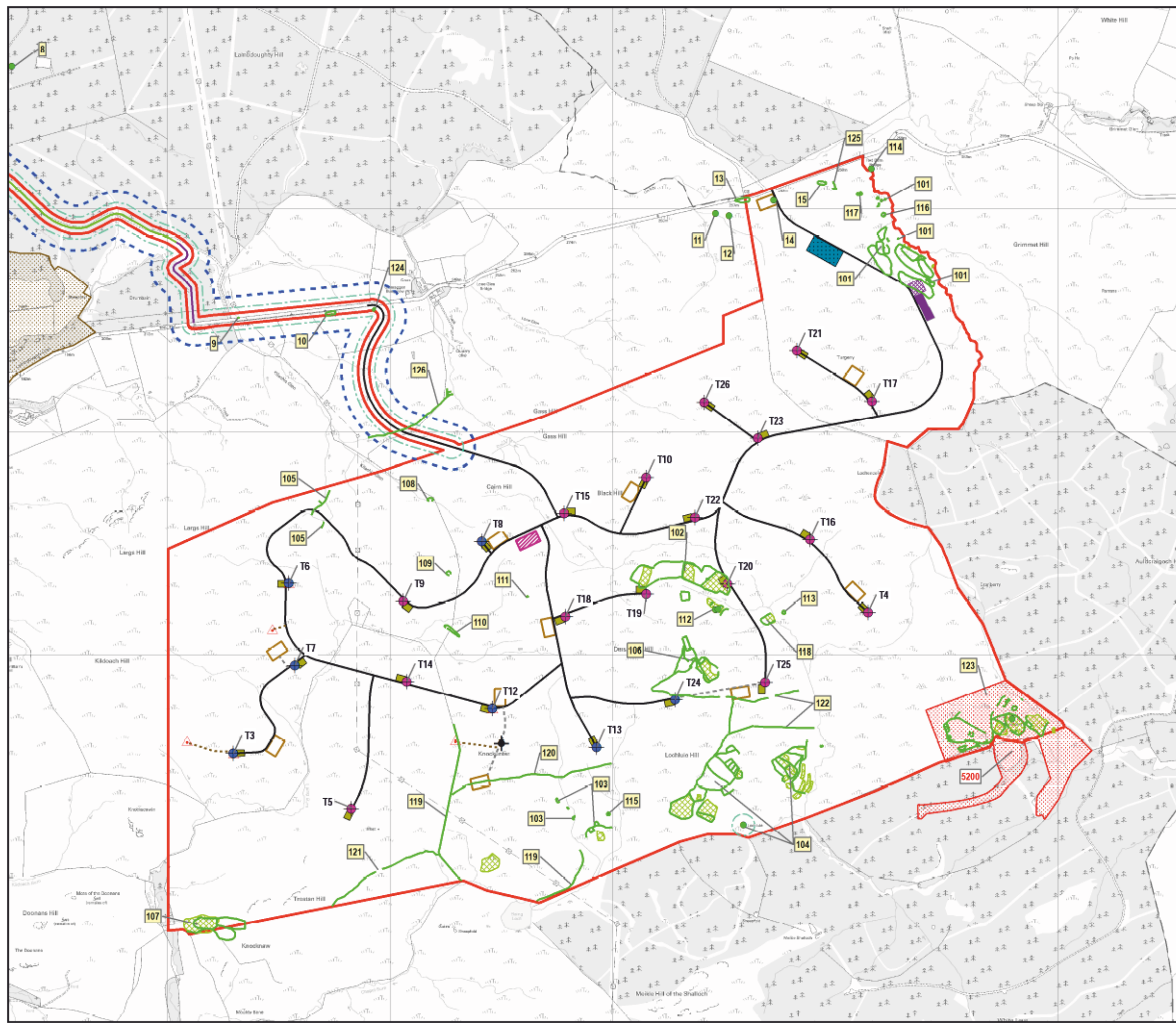
APPENDIX F2: Cultural Heritage Sites and Features along the new Access Route Study Area

TABLE F2.1: CULTURAL HERITAGE SITES AND FEATURES ALONG THE NEW ACCESS ROUTE STUDY AREA										
Site No	Site Name/type	Easting	Northing	NMRS No / SMR No	Source	Site description	Sensitivity	Effect Type	Effect Magnitude	Significance of Effect
1	Cloncaird Castle, Designed Landscape (Non-Inventory; NIDL)	23580	60750	WoSASpin 53489	SMR; Historic maps; HLAmap	<p>The SMR records that Blaeu's map (Ref. F-2) depicts an impaled park and planting. Cloncaird is not recorded on Roy's map (Ref. F-10), though Mitchell (Ref. F-21) notes a 17th century description of the castle being '<i>surrounded with gardens, orchards, and great store of wood</i>'. A modest park and planting are recorded by Armstrong (Ref. F-4). The Ordnance Survey 1st edition map (Ref. F-14) shows a landscape of woodland blocks and strips, more or less contiguous with the neighbouring and much larger landscape of Blairquhan.</p> <p>The Ayrshire Gardens and Designed Landscapes Survey 2007 (Ref. F-22) dates the landscape to the 16th century.</p> <p>The HLAmap (Ref. F-23) describes the area around Cloncaird Castle as 17th-19th policies and parkland.</p>	Medium	Direct	Imperceptible	Negligible
2	Bargenoch Bank, cistern	236366	608130	WoSASpin 51406	SMR	<p>The SMR records that a feature, annotated as 'Cistern (disused)' is shown on the current Ordnance Survey 1:10,000 Landplan map, though it is also possible that the structure may represent an ice-house. It appears in the field as a low grass-covered mound, rising slightly above the level of the surrounding land, with an entrance descending to below ground level, below a roughly-constructed flat arch built of flat angular slabs set vertically, with no obvious indication of mortar visible. Large stones are visible in the interior, possibly representing fallen structural masonry, or possibly representing deliberate partial infilling. The structure may be an ice-house, though it is not located on a north-facing slope, but is perhaps more likely to be a cistern connected with the provision of water to the formal gardens of Cloncaird Castle to the SW. The structure is not depicted on the Ordnance Survey 1st Edition (Ref. F-14).</p> <p>This site was not visited during the field survey as it lies outside the field survey area.</p>	Negligible	None	n/a	n/a
3	Gravel pit	23690	60797	n/a	Historic maps; Field survey	<p>A gravel pit is depicted on the Ordnance Survey 1st Edition map (Ref. F-14).</p> <p>Field survey recorded that the quarry is situated at the periphery of a commercial forestry plantation and has been disturbed by deep ploughing carried out prior to tree planting. It measures approximately 20m by 10m and 3m deep.</p>	Negligible	None	n/a	n/a
4	Building; enclosure	236870	607940	n/a	Aerial photographs; Field survey	<p>A possible building with an enclosure to the south, on the southern side of a small burn, is visible on aerial photographs dating from 1947 and 1952.</p> <p>Field survey identified the footings of the long rectangular building, measuring 23m long by 4m wide, at the periphery of a commercial forestry plantation. Sections of a thick concrete floor are visible in the south west corner of the building remains and a concrete trough, measuring 3 m by 0.75 m, is cut into the floor.</p>	Negligible	None	n/a	n/a
5	Rig and Furrow	236869	607847	n/a	Field survey	Field survey recorded an area of relict rig and furrow cultivation on the east side of Kelse Burn in an area of improved pasture. The rig is aligned north-south and the wave length measures approximately 2 m in width.	None	None	n/a	n/a
6	Field	236979	607823	n/a	Field survey	Field survey recorded a 4 m wide, turf-covered field bank surviving to 0.8 m in height and running roughly north to south across the field and continuing outside	Negligible	None	n/a	n/a

TABLE F2.1: CULTURAL HERITAGE SITES AND FEATURES ALONG THE NEW ACCESS ROUTE STUDY AREA										
	boundary					the survey area.				
7	House of the Hill	23750	60769	n/a	Historic maps; Aerial photographs; Field survey	House of the Hill, comprising a single roofed rectangular building and two enclosures with a well to the southwest, is depicted on the Ordnance Survey 1st Edition map (Ref. F-14). Field survey identified the remains of the building surviving in good to fair condition, within the commercial forestry plantation. The walls survive to a maximum of 2 m in height, with an internal doorway and stone window lintels remaining in place.	Low	None	n/a	n/a
8	Old Quarry (sandstone)	23930	60664	n/a	Historic maps	An old sandstone quarry is depicted and annotated on the Ordnance Survey 1 st Edition (Ref. F-14) and 2 nd Edition (Ref. F-15) maps.	Negligible	None	n/a	n/a
9	Field wall	240321	605508	n/a	Field survey	Field survey recorded the denuded remains of a possible field wall, 12 m long by 2 m wide and 0.3 m high, to the east of Lambdoughty Burn and north of the B741 public road.	Negligible	None	n/a	n/a
10	Quarry	240739	605531	n/a	Field survey	Field survey identified a quarry, 55 m long by 15 m wide and 2 m deep, running parallel to the B741 public road, and located within an area of rough pasture. The quarry has been filled with field clearance stone and other modern debris.	Negligible	None	n/a	n/a

References

- Ref. F-1 RAF (1946). *Aerial Photograph 106G/Scot/UK 153* Frames 4035-6. Flown 1946. Royal Air Force.
- Ref. F-2 Blaeu, J. (1654) *Carricta Borealis - Mid Ayrshire*
- Ref. F-3 RAF (1947) *Aerial Photograph CPE/Scot/UK307*: Frame 3051-2. Flown 1947. Royal Air Force.
- Ref. F-4 Armstrong, A. (1775) *A new map of Ayrshire*
- Ref. F-5 Thomson, J. 1832 *Northern Part of Ayrshire*. Southern Part
- Ref. F-6 Ordnance Survey (1860) 1st Edition *Ayrshire* sheet XLVI six inches to one mile.
- Ref. F-7 RPS (2005). *Dersalloch Windfarm Environmental Statement (April 2005)*. Scottish Power Renewables (UK) Ltd, Glasgow
- Ref. F-8 RAF (1947) *Aerial Photograph CPE/Scot/UK 307*. Frame 3109. Flown 1947. Royal Air Force.
- Ref. F-9 *Aerial Photograph_91441_114621*
- Ref. F-10 Roy, W. (1747-55) *Military Survey of Scotland*.
- Ref. F-11 RAF (1947) *Aerial Photograph CPE/Scot/UK 307*. Frame 3104. Flown 1947. Royal Air Force.
- Ref. F-12 Ordnance Survey (1897) 2nd Edition *Ayrshire* sheet XLVI. six inches to one mile.
- Ref. F-13 Ordnance Survey (1911) *Ayrshire* sheet XLVI six inches to one mile.
- Ref. F-14 Ordnance Survey (1859) 1st Edition *Ayrshire* sheet XLV six inches to one mile.
- Ref. F-15 Ordnance Survey (1897) 2nd Edition *Ayrshire* sheet XLV six inches to one mile.



Key:

- Application Boundary
- A Turbine - 115m Height to Blade Tip
- A Turbine - 125m Height to Blade Tip
- | Permanent Met Mast (PMM)
- Power Performance Assessment (PPA) Masts
- Windfarm Site - New Track (5m wide)
- New Access Route - New Track (5m wide)
- New Access Route - Track Upgrade (5m wide)
- Haul Road (4m wide)
- Temporary Track (4m wide)
- Temporary Satellite Laydown Area
- Proposed Control Building/ Substation Compound
- Temporary Construction Compound (Substation)
- Temporary Construction Compound
- Indicative Crane Pads
- Indicative Borrow Pit
- Scheduled Monument
- E Listed Building Category C(S)
- (Cultural Heritage (point)
- Cultural Heritage (linear)
- Cultural Heritage (area)
- NIDL Site
- Rig and Furrow
- 50m Buffer
- 100m Buffer

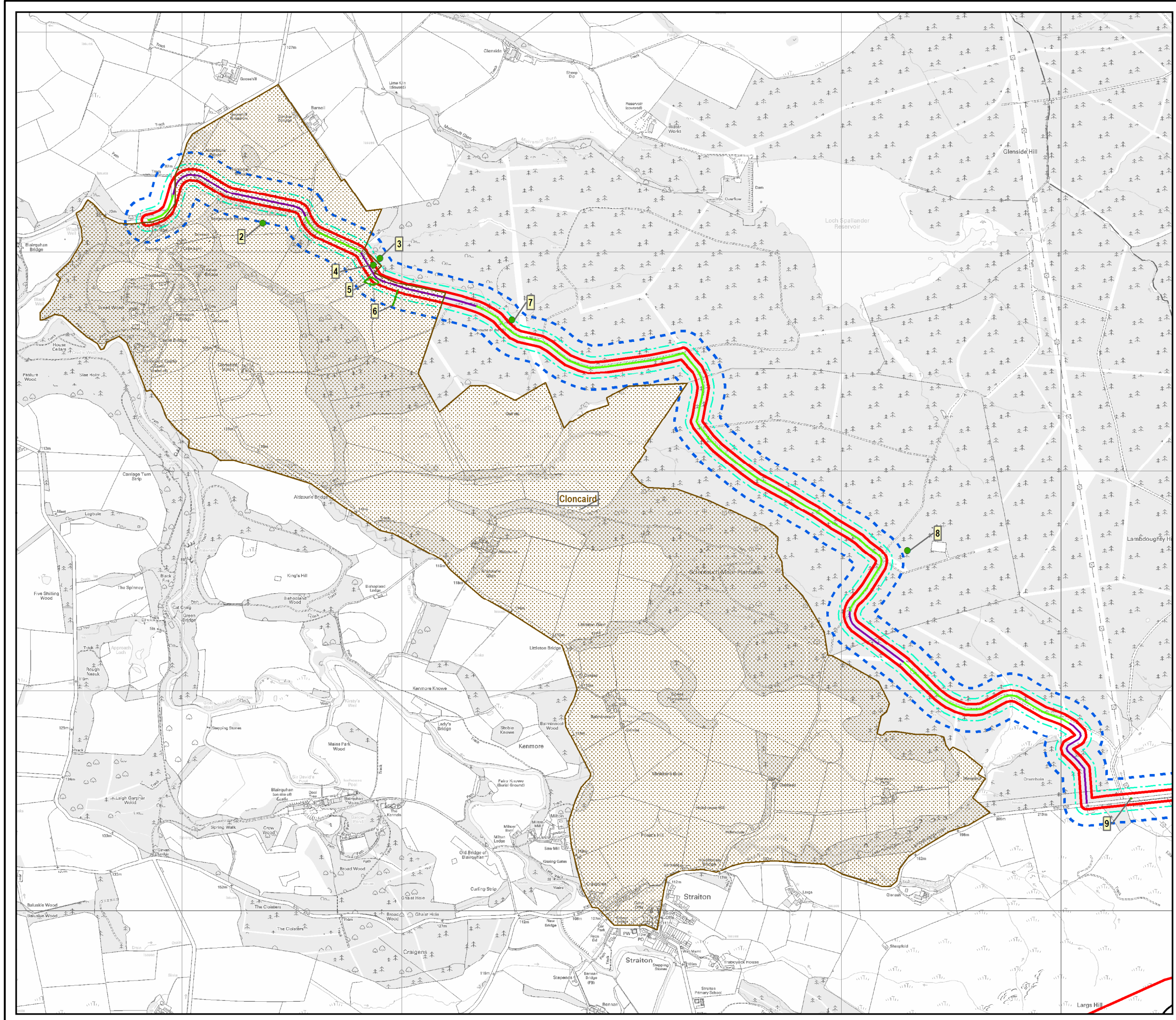
0 Metres 800

Original @ A3

**Cultural Heritage: Constraints
Windfarm Site**

Figure 11.1

**Dersalloch Windfarm
Environmental Statement
2012 Addendum**



Key:

- Application Boundary
- A Turbine - 115m Height to Blade Tip
- A Turbine - 125m Height to Blade Tip
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- Windfarm Site - New Track (5m wide)
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- New Access Route - Track Upgrade (5m wide)
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- E Listed Building Category C(S)
- (Cultural Heritage (point)
- Cultural Heritage (linear)
- Cultural Heritage (area)
- NIDL Site
- 50m Buffer
- 100m Buffer

0 Metres 800

Original @ A3 E

**Cultural Heritage: Constraints
New Access Route**

Figure 11.2

**Dersalloch Windfarm
Environmental Statement
2012 Addendum**