

CENTRE *for* FIELD ARCHAEOLOGY

University of Edinburgh

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Consultancy*

**Proposed Windfarm, Novar Estate, Ross and
Cromarty District, Highland Region
Archaeological Assessment**

Report No. 191

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Author:

Date

Approved by:

Date

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CENTRE *for* FIELD ARCHAEOLOGY
Old High School
12 Infirmary Street
Edinburgh EH1 1LT

Tel: 031-650-8197
Fax: 031-662-4094

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0. SUMMARY

- 0.1 This report describes an archaeological desk-based assessment and field inspection undertaken in December 1994 by the Centre for Field Archaeology (CFA) at Meall an Tuirc and surrounding area within the Novar Estate, near Evanton in the Ross and Cromarty District of Highland Region (NGR NH 54 72). The assessment, commissioned by Bioscan Environmental Consultancy, was carried out as part of an Environmental Assessment for a proposed windfarm project.
- 0.2 The assessment was designed to identify and evaluate any archaeological sites and monuments present in the proposed windfarm area, along the access route and at the proposed substation and construction compound areas, through the examination of desk-based sources and a field inspection of the area.
- 0.3 The results of this work suggest that the archaeological potential of the windfarm area is limited, although the presence of peat cover across most of the windfarm area may mask archaeological features pre-dating peat growth. Given the altitude of the area this is considered unlikely. Two areas of modern ploughing, a machine cut drainage ditch and a grouse butt were located within the windfarm area. The access route passes close to two abandoned farmsteads, several components of which fall within and around the 60m access route corridor. A possible chapel site and burial ground lie adjacent to the access route.
- 0.4 Potential impacts of the development on the archaeological resource are assessed, and suitable potential mitigation measures are proposed in relation to the sites and monuments identified by the study, taking into account their archaeological significance.

1. INTRODUCTION

- 1.1 This archaeological desk-bound assessment and field inspection was carried out on behalf of Bioscan Environmental Consultancy as part of the Environmental Assessment for a proposed windfarm development at Meall an Tuirc and surrounding area within the Novar Estate, near Evanton in the Ross and Cromarty District of Highland Region (NGR NH 54 72). Fieldwork was conducted on the 6th and 7th of December 1994. Two field staff carried out the field inspection of the area under inhospitable wintry conditions. High winds and wintry squalls were experienced and the ground had a light covering of snow. The area of survey was determined on the basis of proposed wind turbine positions, a 60m corridor along the proposed access route, and proposed substation and construction compound areas, as defined on the 1:25,000 scale map entitled 'Novar Windfarm Limited, The Property' supplied to CFA by Bioscan (UK) Limited.
- 1.2 The proposed windfarm includes the upper slopes and summits of Cnoc Gille Mo Bhrianaig, Bendeallt and Meall an Tuirc. The thirty six proposed turbine positions are located on the north western slopes of Meall an Tuirc, across the saddle joining this summit to those of Cnoc Gille Mo Bhrianaig and Bendeallt, where the majority of the turbines are proposed. The site attains a maximum altitude of 625m on the summit of Meall an Tuirc and lies entirely above the 500m contour. The windfarm area is managed as upland estate where deer and grouse are husbanded for shooting. The site is completely covered with heather growing on poorly drained blanket bog. In part the area is deeply incised with water and wind eroded peat gullies, some in excess of 2m deep. The proposed substation and construction compound site locations are similarly on heather covered blanket bog at c. 300m and 260m respectively. Currently the proposed access route is variously a forestry road and an estate track with the exception of a c.1 km section at Balnarge, where there is at present no track. In general the proposed access route passes through forestry and over upland heather-covered blanket bog. At Balnarge the proposed route passes over field systems associated with the two farmsteads and runs into blanket bog at Cnoc na Moine.
- 1.3 A single previously recorded feature of archaeological interest lay within the 60m access route corridor.
- 1.4 The objective of this study has been to assess the proposed windfarm site, access route corridor, substation and construction compound in terms of their archaeological potential and significance, and to propose suitable potential mitigation measures.
- 1.5 Ross and Cromarty has a long history of human occupation, probably commencing about 10,000 years ago as the area was colonised by mobile hunter-gatherers following climatic improvement at the end of the last glaciation. By about 4,000 BC farming was introduced to the area, beginning a process of substantial change to the natural landscape, as forests were felled and fields cleared. This process continued through the Bronze Age, until

around the middle of the 1st millennium, when an increasingly wet and cool climate probably caused a reduction in arable farming. The area is remote from the area of Roman occupation in southern Scotland, and no Roman military remains relating to campaigns in the north, such as roads and camps, have been found. The area was subject to Norse influences during the early Historic and early medieval periods. Agricultural improvements affected the area in the late 18th and early 19th centuries, principally involving the development of sheep farms and hunting estates.

2. METHODS STATEMENT

- 2.1 A standard for this type of project has been established in previous research projects undertaken by CFA for Environmental Assessment studies. Recording and assessment were conducted according to established CFA methods.
- 2.2 An assessment of the records held by the National Monuments Record for Scotland (NMRS) has been undertaken. These records consist of a card index and a computer database of all the known archaeological sites and monuments in Scotland, and associated oblique aerial photographs where appropriate. This assessment has provided information on the range of monuments present both within and also in the vicinity of the proposed windfarm site, access routes, substation and construction compound areas.
- 2.4 The most recent published list of Ancient Monuments in Scotland (Historic Scotland 1993) has been checked to identify any archaeological sites or monuments within the proposed windfarm site scheduled under the Ancient Monuments and Archaeological Areas Act 1979.
- 2.5 Vertical stereo aerial photographic coverage held by the Royal Commission on Ancient and Historical Monuments of Scotland (RCAHMS) has been examined to ascertain whether any sites are present as soil or vegetation marks, or as sites with low relief not readily visible on the ground in present conditions. Imagery from 1946, 1950 and 1962 was available for consultation. The examined sorties are listed in section 7.1.
- 2.6 An examination of relevant first edition Ordnance Survey map coverage has been made (Ross-shire Sheets LII, LXIV and LXV, published in 1880 and 1881, 6 inches to 1 mile). In addition, other readily available 18th and 19th century cartographic sources held at the National Library of Scotland Map Library have been examined for evidence of former land-use patterns within the study area. The sources consulted are listed in section 7.2.
- 2.7 A rapid field survey of the proposed windfarm site has been undertaken. The area was inspected to locate any previously unidentified visible archaeological monuments, and to assess the topography and geomorphology of the proposed development area. All apparent archaeological features were recorded and their locations noted. The identified sites were not measured in using surveying equipment, and the positions shown on Figs 1 and 2 should be treated as approximate.
- 2.8 The results of this research have been assessed in terms of the archaeological potential of the area. Archaeological monuments located are detailed in the gazetteer (Appendix 1). A table listing the relative significance of these monuments is included (Table 1). Maps showing the distribution of archaeological monuments are included (Figs 1 and 2). The figures also present a colour coded map assessment of archaeological potential. This colour coded cartographic method is that preferred by Historic Scotland for such assessment work. For this assessment the following categories were considered:

Red - Protected (scheduled) Ancient Monument
Yellow - Area of archaeological interest
Green - Area of low archaeological potential
Blue - Probably archaeologically sterile

3. ARCHAEOLOGICAL RESULTS

3.1 General

- 3.1.1 Numbers in parentheses in the following sections refer to the monument numbers annotated in circles on Fig. 1 and detailed in Appendix 1.
- 3.1.2 Three archaeological sites were located within the route corridor by the desk based assessment (1-3). Of the three, one was recorded in the NMRS (1) and lies on the southern edge of the proposed route. The remaining two sites (2 and 3) were noted from map analysis. In addition, four further features representing recent human activity were recorded within the proposed windfarm area.

3.2 Desk-based survey

3.2.1 Documentary research

A single archaeological site was recorded in the NMRS (1). This is described as Cladh Churadain, a possible chapel and burial ground.

3.2.2 Map research

The first edition 1:10,560 Ordnance Survey coverage was examined (Ross-shire sheets LII, LXIV and LXV, published in 1880 and 1881, 6 inches to 1 mile). This source revealed two farmsteads adjacent to the proposed access route; both are now abandoned (sheet LXIV). The possible chapel site and burial ground are also mapped on the first edition (sheet LXIV) and appear on the present OS 1:50,000 (Landranger sheet 21 1989). The earlier map coverage of sufficient scale that shows the survey area in any detail, produced by Roy (1747-55) and Thomson (1826), indicates no features of archaeological significance. The combined cartographic evidence suggests that land management within the proposed windfarm site has not changed substantially, with the exception of forestry plantation, for at least the last 250 years.

3.2.3 Aerial photographic research

Examination of the vertical stereo aerial photographic coverage revealed no evidence of any archaeological features within the proposed development area and access route. The sites located during field inspection were not apparent on the aerial photographs.

3.3 Archaeological sites and monuments

3.3.1 Possible chapel and burial ground.

This site (1) is recorded in the NMRS as: "Cladh Churadain, St. Curitan's graveyard". It is described as a small rectangular burial ground north of the

farmhouse of Assynt, which was used within living memory. There are said to have been stones with inscriptions and carvings, but none of the boulders present there now resemble gravestones in any way. It lies within conifer planting, and was inadvertently planted but is now cleared and tended. There is no upstanding trace of a building recorded in the area. This site was not visited during field survey due to difficulties of its location within the conifer plantation.

3.3.2 *Abandoned farmstead, Auchnagaul.*

The abandoned farmstead (2) of Auchnagaul has several components which lie within the access route corridor. These include the dry-stone boundary wall of the farmhouse which lies within 3m south of the proposed route. A low stone walled three-sided shelter revetted into a small natural mound was noted within 10m north of the proposed access track. What appears as a sunken relict track with an upcast bank to the east, crosses the proposed route, as does a low stone turf-covered field bank. Other features, including a kiln, probably for grain drying, lie to the north outside the 60m corridor.

NH 36NE
0032

3.3.3 *Abandoned farmstead, Balnarge.*

The abandoned farmstead of Balnarge (3) also has components which lie within the proposed 60m corridor. These include a derelict farmhouse with a collapsed roof and associated outbuildings to the south of the proposed route. A three sided revetted stone-lined enclosure, possibly for storage, lies c.10m west of the derelict farmhouse. Several associated features lie south of and outwith the 60m corridor. These include a kiln and various field banks and walls. To the north of the proposed access route there is a field system of low stone and turf covered field banks. To the west of the farmstead a low stone and turf bank crosses the proposed access route and continues north along the eastern side of Cnoc na Moine.

NH 36NE
0033

3.3.4 *Two areas of modern ploughing*

Seven modern machine cut furrows (4) were recorded within the proposed windfarm area. These appear to be unplanted forestry ploughing, although their restricted extent and isolated location make them difficult to interpret. A further seven modern machine cut furrows (6) were recorded within the proposed windfarm area. These were very similar to (4), although they are longer. They present the same difficulties of interpretation.

3.3.5 *Grouse butt*

A single grouse butt (5) was located within the proposed development area. This was of typical construction, cut into peat with a low penanular peat bank encircling the top. The butt was marked with a stake labelled '9', suggesting that at least eight other butts were present in the area. None of these other butts were found.

3.3.6 *Drainage trench*

A shallow machine cut drainage trench (7) and small bank runs adjacent to a track (on its up-slope side) in the north western part of the proposed windfarm area. This was interpreted as a drainage channel for the track.

4. EVALUATION

4.1 Policy context

4.1.1 Archaeological sites and landscapes represent a non-renewable resource. The main thresholds of archaeological significance proposed in the National Planning Policy Guideline 5, Archaeology and Planning from the Scottish Office (SOEnD 1994a) are:

- a) sites of National Importance.
- b) sites of Regional and Local Importance.
- c) other sites of lesser importance.

4.1.2 Sites of National Importance comprise those sites protected by scheduling under the Ancient Monuments and Archaeological Areas Act 1979, Section 2, or as listed buildings designated under the Town and Country Planning legislation, and sites of "schedulable quality". Scheduling is an ongoing process and not all sites of "schedulable quality" are currently scheduled.

4.1.3 Sites of Regional and Local Importance are those that do not merit scheduling, but which have significance within a local context. This may, for example, apply to their importance to local history, or they may be the only local example of a monument type. The Ancient Monuments legislation makes provision for local authorities to protect such sites.

4.1.4 The third category of sites are of lesser individual importance, although they may comprise component parts of a landscape rich in archaeological monuments, and thereby gain greater significance. The study of landscapes with relict archaeological features is currently the subject of much archaeological concern.

Archaeological Sites

No	Site	Importance
1.	Possible chapel and burial ground	Regional/Local
2.	Abandoned farmstead	Regional/Local
3.	Abandoned farmstead	Regional/Local
4.	Modern ploughing	Lesser
5.	Grouse butt	Lesser
6.	Modern ploughing	Lesser
7.	Drainage channel and upcast	Lesser

4.2 Assessment of importance

4.2.1 No sites of National Importance are presently classified within the proposed windfarm site, and on the basis of available evidence it is not considered that any of the sites identified by this study are of "schedulable quality".

4.2.2 The possible chapel site and burial ground (1) and the two abandoned farmsteads (2 & 3) identified during the desk based survey are considered to be of regional or local importance, as they indicate changed landuse and settlement patterns within the vicinity of the windfarm site. While effort should be made to avoid the structural components of the two farmsteads the effect of the access route on the associated field boundaries to the north and west of these sites is considered negligible.

4.2.3 The remaining four sites are of lesser archaeological significance and all appear to belong to activity conducted within the last fifty years. Given their recent construction, they have not been designated as archaeologically sensitive on the accompanying plans.

4.3 Archaeological potential

4.3.1 In addition to the sites identified it is possible that further archaeological remains are buried beneath the peat cover which extends across the entire proposed windfarm area, and part of the access route at Cnoc na Moine (NH 563 695). Peat formation is related to the operation of climatic change and other factors, such as land drainage, at a local scale. The date of the onset of peat formation at this location could only be determined from palynological analysis and radiocarbon dating. Given the altitude of the windfarm area it seems unlikely that there is much potential for archaeological remains to lie buried beneath the peat. Nevertheless, it remains possible that some features are present. The high altitude settlement at Ben Griam Beg, Sutherland, illustrates the potential for remains to be present at high altitudes in northern Scotland (Raltson and Smith 1983).

5. IMPACTS AND MITIGATION

- 5.1 Planning Advice Note 42, Archaeology and Planning (SOEnD 1994b) indicates that the principle that should underlie all planning decision-making is preservation of cultural resources, *in situ* where possible, and by record if destruction cannot be avoided. It is recognised in this document that preservation may not always be possible, and where damage is unavoidable various mitigation measures may be proposed.
- 5.2 Any ground-breaking activities associated with construction and maintenance of the windfarm can be expected to damage, and possibly obliterate, archaeological remains within those areas. Such activities may include turbine construction, provision of access routes and cutting of cable channels. In addition, above-ground disturbance, such as caused by vehicular movement and soil and overburden storage may produce irreversible impacts upon archaeological remains.
- 5.3 Of the seven monuments which have been identified within the study area of the proposed windfarm site and access corridor, only the possible chapel and burial ground and the two abandoned farmsteads lie in close proximity to the proposed access corridor. These sites are of regional or local importance and should be preserved *in situ*. Consideration should therefore be given to ensuring the avoidance of these sites, particularly where no track exists at Balnarge and Auchnagaul. The chapel site and burial ground are within a conifer plantation and not directly threatened by the existing road, and it should be possible to ensure that the settlements are avoided by marking out their boundaries during any access route construction operations in their vicinity. If other considerations make preservation *in situ* impossible, excavation of any components to be damaged would be necessary.
- 5.4 The remaining four sites are considered to be of lesser archaeological potential. No protection or mitigation measures are considered necessary for these recent remains.
- 5.5 There is no cost-effective, non-invasive, archaeological method of ensuring that no archaeological remains are buried beneath the peat cover. Depending on the working method to be employed, it may be appropriate to conduct an archaeological inspection of selected areas that are cleared of peat prior to construction of the windfarm and its services. In the event of significant archaeological features being identified, either they could be recorded and examined prior to their removal, or, in the case of the wind turbines, a substitute location could be selected. The chance of discovery of archaeological remains in such circumstances is considered to be low, but not negligible.

6. CONCLUSIONS

- 6.1 The proposed development contains a limited number of features of cultural heritage interest. A minority of these are significant at the regional and local scale, and all can be avoided by the sensitive siting of the elements of the development. Mitigation measures are proposed. It is possible that further archaeological features are masked by peat growth, but this is not considered to represent a major constraint.

7 REFERENCES

7.1 Vertical Aerial Photographs

Sortie No B96 CPE/SCOT/UK 184, 9/10/1946, 5115 - 5118 & 2114 - 2118

Sortie No B143 CPE/SCOT/UK 183, 8/10/46, 4403 - 4407

Sortie No B521 58/RAF/5391, 14/08/62, F22 0170 - 0174

Sortie No B316 541/A/543, 12/06/50, 3286 - 3289

7.2 Cartographic

Ordnance Survey 1880 Ross-shire, sheet LII. First edition 1:10,560, surveyed 1875.

Ordnance Survey 1880 Ross-shire, sheet LXV. First edition 1:10,560, surveyed 1874-5.

Ordnance Survey 1881 Ross-shire, sheet LXIV. First edition 1:10,560, surveyed 1875.

Roy, W. 1747-55 Military Survey of Scotland.

Thomson, J 1826 Ross and Cromarty Shires.

7.3 Bibliographic

Ralston, I.B.M & Smith, J.S 1983 "High altitude settlement on Ben Griam Beg, Sutherland", *Proc Soc Antiq Scot*, 113, 636-8

SOEnD 1994a National Planning Policy Guideline 5, Archaeology and Planning. Scottish Office Environment Department.

SOEnD 1994b Planning Advice Note 42, Archaeology and Planning. Scottish Office Environmental Department.

Historic Scotland 1993 A List of Ancient Monuments in Scotland

APPENDIX 1: GAZETTEER OF SITES

Six figure NGRs are provided for these monuments, reflecting the accuracy with which they could be recorded during field inspection.

No: 1

NGR: NH 5851 6731

Source: NMRS (ref: NH 56 NE 2)

Class: Possible chapel and burial ground

Description: This site is recorded in the NMRS as:

"Cladh Churadain, St. Curitan's graveyard, is a small rectangular burying ground north of the farmhouse of Assynt, used within living memory, and stated to have contained stones with inscriptions and carvings. It was inadvertently planted but is now cleared and tended.

"Cladh Thuradain is an enclosure 28m square, situated in a slight hollow within woodland. It is formed of banks or inward facing scarps 0.8 max. height. Parallel to and inside the SW side of the enclosure is a second bank, c. 14m long and 0.3m maximum height, but this does not appear to form the remains of a building, nor is there any trace of a building in the area. There are a few stones and boulders within the enclosure but none appear to be inscribed or for that matter resemble gravestones in any way."

This monument was not located during field inspection.

No: 2

NGR: NH 568 688

Source: Desk based map research and field inspection

Class: Abandoned farmstead Auchnagaul

Description: The abandoned farmstead of Auchnagaul has several components which lie within the access route corridor. These include the dry-stone boundary wall of the farmhouse which lies within 3m south of the proposed route. A low stone-walled three-sided shelter revetted into a small natural mound was noted within 10m north of the proposed access corridor. What appears as a sunken relict track with an upcast bank to the east crosses the proposed route as does a low stone turf covered field bank. Other features, including a kiln, probably for grain drying, lie to the north outside the proposed 60m corridor.

No: 3

NGR: NH 565 689

Source: Desk based map research and field inspection

Class: Abandoned farmstead Balnarge

Description: Similar to the abandoned farmstead above (2), the derelict farmstead of Balnarge has components within the proposed 60m corridor. These include a derelict farmhouse with a collapsed roof and associated outbuildings to the south of the proposed route. A three-sided revetted stone-lined enclosure - possibly for storage -

lies c.10m south of the derelict farmhouse. Several associated features lie south of and outwith the 60m corridor. These include a kiln and various field banks and walls. To the north of the proposed access route there is a field system of various low stone and turf covered field banks.

No: 4
NGR: NH 557 717
Source: Field inspection
Class: Modern ploughing

Description: Seven modern machine cut furrows were recorded within the proposed windfarm area with a length of c. 75 - 100m in length and a frequency of 2.5 - 3m. These appear to be unplanted forestry ploughing, although their restricted extent and isolated location make them difficult to interpret.

No: 5
NGR: NH 555 713
Source: Field inspection
Class: Grouse butt

Description: A single grouse butt was located within the proposed development area. This was of typical construction, a c.3m diameter cut into peat with a low penanular peat bank encircling the top. This was marked with a stake labelled '9' indicating the likelihood of at least eight other butts. None were found.

No: 6
NGR: NH 553 717
Source: Field inspection
Class: Modern ploughing

Description: Seven modern machine cut furrows running NE-SW for c.100m and with a frequency of 2.5 - 3m were recorded within the proposed windfarm area. These were very similar to the above furrows (4) - although longer - and present the same difficulties of interpretation.

No: 7
NGR: NH 535 731 to NH 538 733
Source: Field inspection
Class: Drainage channel

Description: A shallow machine cut drainage trench c. 0.25m deep and 0.5m wide with a small upcast bank c. 0.2m high runs adjacent to a track - on the up slope - in the north western part of the proposed windfarm area. This was interpreted as a drainage channel for the track.

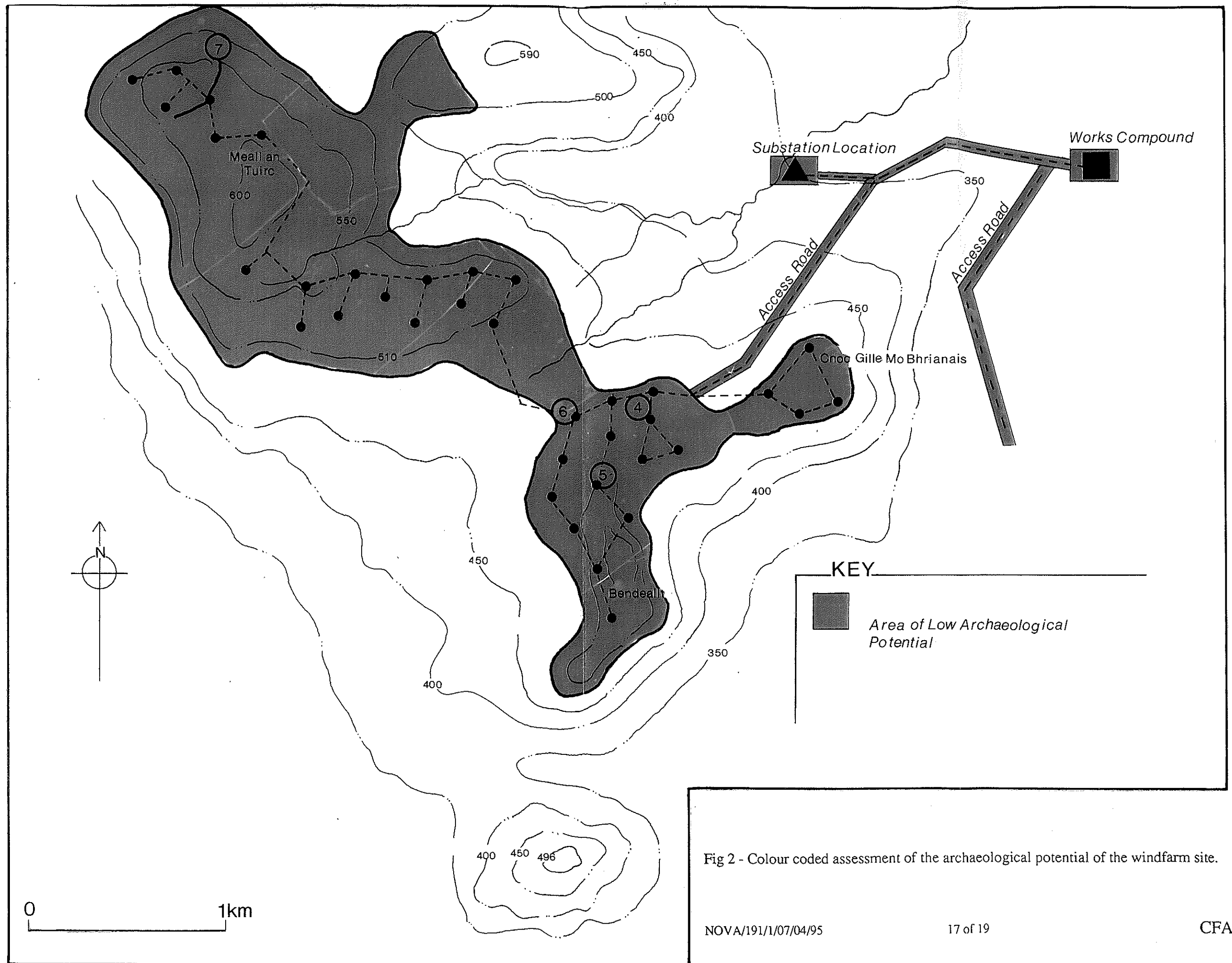


Fig 2 - Colour coded assessment of the archaeological potential of the windfarm site.

