

Sibmister Wind Turbine (Resubmission): Environmental Report



July 2013



A stylized illustration of a landscape featuring several wind turbines on a green hill. The turbines are depicted in a simplified, geometric style with three blades each. The hill is covered in green grass and dotted with various green trees. The sky is a light, pale blue. The overall aesthetic is clean and modern, typical of corporate branding for renewable energy companies.

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1. INTRODUCTION

1.1 The Environmental Report

1.1.1 This Environmental Report (ER) presents environmental information in support of an application for planning permission to construct and operate a single wind turbine with a maximum tip height of 46 metres (m) and an electrical output of around 400 kilowatts (kW) at Sibmister in the Castletown and District Community Council area in Caithness. It accompanies a planning application, which has been submitted to The Highland Council for planning permission under the Town and Country Planning (Scotland) Act 1997. The location of the proposal is shown in **Figure 1.1**.

1.1.2 The application is a resubmission of a previous proposal (12/03461) for a similar turbine in a more elevated location to the south. This was withdrawn on 23 April 2013 following discussions with the Local Planning Authority during which concerns were raised that the original location of the turbine at a higher elevation was potentially unacceptable due to its potential landscape and visual effects. The relocated proposal is at an elevation of 103m above ordnance datum (AOD), 12m below that of the original and the tip height of the resubmitted scheme would lie at a height above sea level of 149m AOD, 33m below the tip height AOD of the original withdrawn proposal, which was 182m AOD. To illustrate the difference between the previous withdrawn proposal and this resubmitted proposal for a smaller turbine at a lower elevation, a number of comparative photomontage images have been produced as **Figures 5.1 to 5.6**.

1.1.3 This ER includes the findings of technical environmental studies carried out to assess the resubmitted proposal. This reporting process is discussed further in **Chapter 5**.

1.1.4 Included in this ER are:

- an introduction and description of the proposal;
- a description of the findings of the assessments;
- summary impacts table;
- appendices; and
- figures: key figures and visualisations of the proposal are provided in a separate A3 volume.

1.2 Site Description

1.2.1 The site is located on the Hill of Olrig in Caithness, some 6km east southeast of Thurso and 3.5km southwest of Castletown, as shown in **Figure 1.1**.

1.2.2 The proposed turbine is located on farmland at Sibmister owned by the Sutherland family. The layout of the proposal is shown in **Figure 1.2** and a detailed layout is shown in **Figure 1.3**.

1.2.3 The nearest settlement is Castletown which lies 3.5km to the northeast. Sibmister Farm itself lies 401m to the north-west of the proposed turbine and Sibmister Farm cottages (also owned by the Sutherland family) are 351m, also to the northwest. Dispersed dwellings and farms are also situated alongside the minor roads in proximity of the site and form the closest dwellings. The closest

10. HERITAGE STATEMENT

10.1 Introduction

- 10.1.1 The purpose of this section of the Environmental Report (ER) is to assess the proposed development in terms of its potential effects upon the Cultural Heritage resource of the site and surrounding area. Cultural heritage resources, which have been assessed, include Scheduled Ancient Monuments (SAMs), and other archaeological sites identified by the Royal Commission on the Ancient and Historic Monuments of Scotland.
- 10.1.2 The assessment has comprised two stages: an initial desk-based assessment, which was followed up by a site visit. The desk-based element has drawn on readily available documentary and cartographic evidence, to inform the baseline condition of the site.

10.2 Scope

- 10.2.1 The assessment has drawn on the existing Historic Scotland and Canmore databases of historic monuments, the latter of which is held and maintained by the Royal Commission on the Ancient and Historic Monuments of Scotland. All SAMs, listed buildings and other documented historic monuments and sites within 2km of the proposed turbine have been identified and assessed.
- 10.2.2 The potential for indirect effects on the settings of monuments has only been considered where the preparation of a Zone of Theoretical Visibility map has confirmed that the potential for inter-visibility between a monument and the proposed turbine exists.
- 10.2.3 The potential for direct and indirect effects on the identified monuments and the wider archaeological resource is identified and appropriate mitigation to address any potential impacts which, could result from the construction and operation of the turbine is set out.

10.3 Relevant Policy and Guidance

- 10.3.1 The assessment has been undertaken taking into account the following guidance and legislation.

Scottish Policy

- 10.3.2 National planning policy on the historic environment is set out in Scottish Planning Policy (SPP), and is supported by Planning Advice Note (PAN) 2 / 2011 Planning and Archaeology (published July 27, 2011) and PAN 71 Conservation Area Management. The SPP should be read in conjunction with the Scottish Historic Environment Policy (SHEP) and the Managing Change in the Historic Environment guidance, produced by Historic Scotland. Together these provide the Scottish Government's policy and advice on planning for the historic environment and should be taken into account by planning authorities when determining applications for planning permission for development, which may affect the historic environment.
- 10.3.3 Key elements of the policy include:

- encouraging a positive and proactive approach to managing change in the historic environment, enabling development and securing best viable use; and
- ensuring the special qualities of the historic environment are protected, conserved and enhanced. This should cover statutory and non-statutory designations, while recognising that the latter, such as archaeological remains, can be a material consideration in the planning process.

Legislation

- 10.3.4 Statutory protection for archaeology is principally outlined in the Ancient Monuments and Archaeological Areas Act (1979) as amended by the National Heritage Act (1983) and nationally important sites are listed in a Schedule of Monuments. Scheduled Monument Consent (SMC) is required before any work affecting the fabric of a Scheduled Monument can be carried out.
- 10.3.5 The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 details the duties of National and Local Authorities in respect of the listing and protection of Listed Buildings and Conservation Areas.

Regional and Local Policy

- 10.3.6 The appraisal has taken into consideration relevant policies dealing with cultural heritage in the Development Plan. These are further discussed in **Chapter 6**.
- 10.3.7 Historic Scotland have not yet established any policy guidelines with regards to visual impacts on the settings of Scheduled Monuments, and have recommended guidance be taken from Scottish Natural Heritage, Visual Assessment of Windfarms: Best Practice.

10.4 The Assessment of Potential Effects

- 10.4.1 The potential effects on the cultural heritage can take the form of direct (physical) and indirect (largely visual) impacts. The assessment of physical effects considers direct effects upon features of cultural heritage interest, whether known sites or unknown buried archaeology, which are in danger of being disturbed or destroyed. Physical impacts are likely to occur during construction and decommissioning, and are permanent and irreversible. They are discussed within **Chapter 2**.
- 10.4.2 Data on potential sites was collated from the online databases held and managed by Historic Scotland and the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS).

Desk-based Assessment

- 10.4.3 This assessment has sought to identify all scheduled and listed archaeological and historical sites and monuments within 2km of the proposed turbine, equating to the geographical area within which the turbine would be a prominent feature. Particular attention was given to the identification of sites close to the site boundary as it is these, which are considered to be at potential risk of physical damage during the construction of the project.

- 10.4.4 No detailed consideration of potential impacts from noise or shadow flicker (see **Chapter 12**) has been undertaken for Cultural Heritage features, since no significant above ground or built heritage features exist within or immediately adjacent to the site to receive any such impacts.
- 10.4.5 A review of historical OS mapping has not identified any additional evidence of archaeological sites in the vicinity of the site, which could subsequently have been lost.

Zone of Theoretical Visibility

- 10.4.6 The ZTV used to inform this assessment has been calculated from tip height to ground contours and does not allow for any vegetation (such as mature blocks of trees) or minor topographical features such as rock outcrops. The ZTV is calculated to reflect visibility at approximately 2m above ground level. The ZTV is further explained in **Chapter 7**.
- 10.4.7 In considering effects using this methodology, it should be remembered that the ZTV is a theoretical construct, based upon a fairly crude base terrain modelling only, and therefore represents a “worst case scenario” and in reality visual effects may be substantially less than suggested.

10.5 Site Description

- 10.5.1 The site and proposed layout, as revised, are described fully in **Chapter 2**. The land is currently used for rough moorland grazing. No previously unrecorded archaeological features have been noted on or near the site during site visits.

10.6 Features Beyond the Site Boundary

Scheduled Ancient Monuments

- 10.6.1 There are two SAMs within around 2km of the proposed turbine; the Cairn of Sibmister Broch, which lies around 400m to the northwest of the proposed turbine and the Orlig House Broch, which lies just over 2km to the east. The Zone of Theoretical Visibility indicates that there would be no visibility of the turbine from the latter.

Other Monuments

- 10.6.2 The desk assessment has identified no archaeological sites on or close to the application site boundary. The RCAHMS database identifies three unscheduled archaeological sites within 500m of the site boundary consisting of two separate standing stones of uncertain and potentially modern date (Canmore refs: 91601 and 91606), the Sibmister farmstead (ref: 91599) and the remains of a milldam and millrace (ref: 91605). The locations of these unscheduled but recorded sites are illustrated on **Figure 10.1**.
- 10.6.3 It is not anticipated that the construction and operation of the proposed wind turbine would have any significant impact on these sites

Listed Buildings

- 10.6.4 The following four listed buildings lie within 2km of the proposed turbine, forming a dispersed group some 1.7 to 1.8km to the east:
- Orlig House Gate Lodge And Gate Piers (HB Number 14015);

- Orlig, South Lodge Including Boundary Wall (HB Number 46555);
- Orlig House (HB Number 14014); and
- Orlig Farmhouse (HB Number 14016).

10.6.5 These four buildings are listed category B sites and are of regional or national significance. The ZTV indicates, however, that there is no potential visibility from the first three properties listed above, with only marginal visibility from Orlig farmhouse being predicted. In practice, however, Orlig farmhouse lies in a relatively heavily wooded landscape, which very effectively screens the potential turbine from the property. The proposed turbine is, therefore, not predicted to have any significant direct or indirect effects on these buildings or their settings.

10.7 Archaeological Potential

10.7.1 As evidenced by the data held by RCAHMS, and from the observation of the landscape form and settlement pattern in general, there is evidence from within 2km of the site of prehistoric settlement in the form of brochs and cairns, along with the more recent evidence of post mediaeval farming and quarrying.

10.7.2 On the basis of the above, it is considered that there is, therefore, some potential for unknown archaeological remains to survive in the vicinity of the proposed turbine, which may be disturbed during construction. If encountered, any unknown archaeological remains are likely to be associated with post mediaeval farming or earlier pre-mediaeval settlement. The potential for such remains to survive, and to be present within the limited footprint of the turbine is, however, considered to be low. The potential for significant and nationally important remains to be encountered is also considered to be very low.

10.7.3 The development footprint is relatively limited, compared to the area of the site. The largest impact will come from the construction of the crane pad, and the excavation for the turbine foundation.

10.8 Potential Construction Effects

10.8.1 No effects are anticipated from construction upon any nationally important designated or non-designated cultural heritage features.

10.8.2 The development is not predicted to have any impact on any other recorded archaeological sites in the vicinity of the turbine.

10.8.3 There is a low potential for unknown archaeological remains to be encountered during groundwork on the site. Such remains are likely to be of local or more rarely, regional importance. Any groundwork is likely to cause disturbance to such remains, should they exist. Due to the limited nature of the footprint of the development, this is unlikely to cause total loss or major damage to any nationally important remains. The construction of the development is considered to have a low potential to cause damage to locally or regionally important remains, if present. Potential effects are considered to be minor.

10.8.4 Indirect, visual effects upon the settings of features beyond the site boundary are considered below.

10.9 Potential Operational Effects

10.9.1 No direct effects are anticipated from the operation of the turbine.

Scheduled Ancient Monuments within 2km of the site.

10.9.2 There is one SAM within 2km of the proposed turbine and another just over 2km. The ZTV shows that potential visibility of the turbine from the more distant SAM, the Orlig House Broch, would not be possible. Visibility from the closer SAM, the Cairn of Sibmister Broch, is likely to be limited due to the screening effects of buildings and vegetation at Sibmister Farm.

Other monuments within 2km of the site

10.9.3 As described above, there are four listed buildings within 2km of the proposed turbine, which are also within the potential zone of visual influence. In practice, however, there is only predicted visibility from one of these buildings, Orlig Farmhouse, although the presence of some substantial areas of existing mature woodland would, in practice, prevent views of the turbine from the house.

10.9.4 Potential effects on the settings of Orlig Farmhouse are, therefore, not considered to be significant.

Mitigation

10.9.5 No recorded features within the site will be directly affected by the construction of the development.

10.9.6 A watching brief will be carried out during construction, where significant ground works are expected.

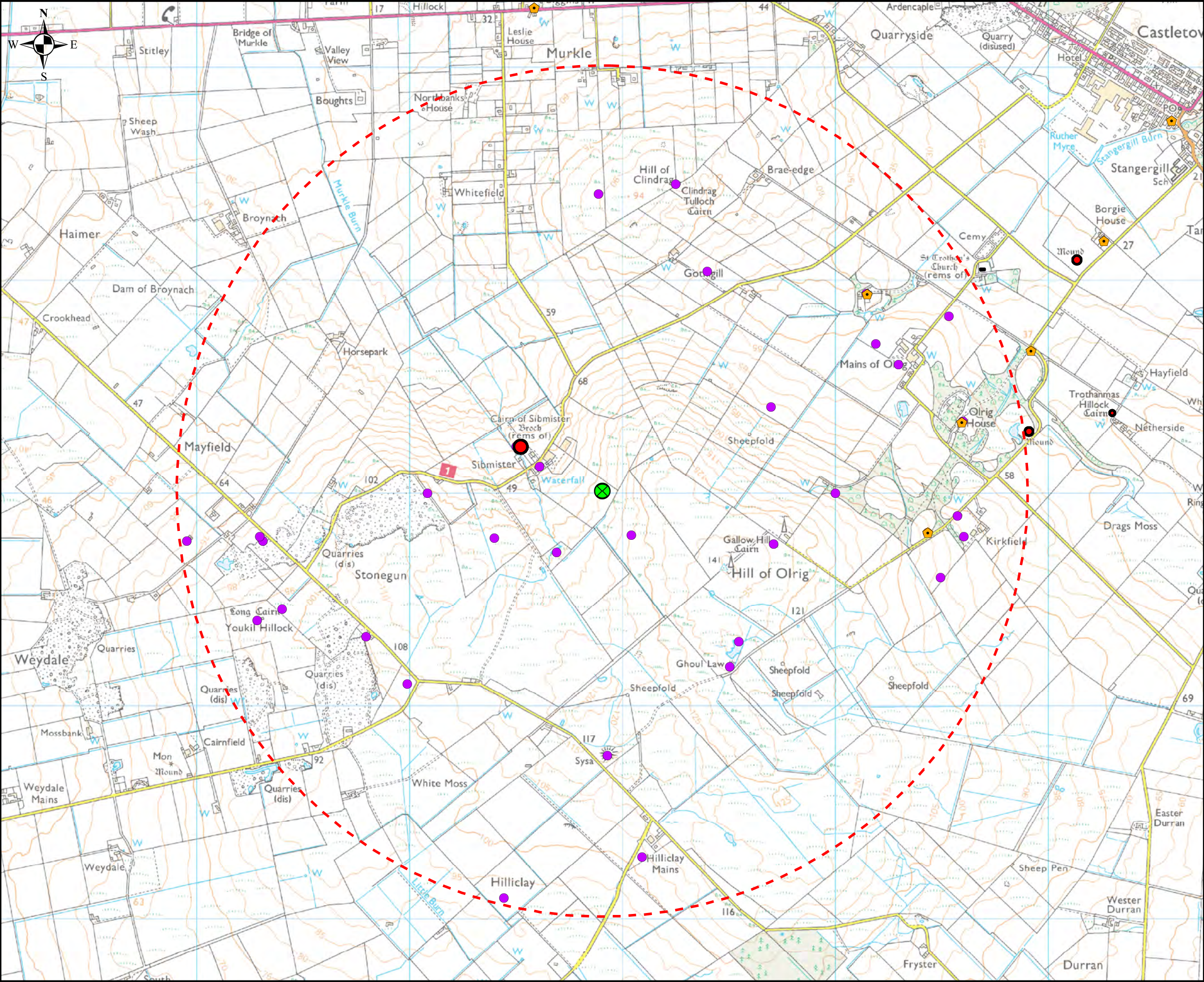
10.9.7 The extent and scope of the proposed archaeological recording programme will be agreed with The Highland Council Historic Environment Team in advance of construction, and implemented in response to an appropriate planning condition.

10.10 Conclusions

10.10.1 No significant direct effects are anticipated upon archaeological features within the site, although some measures are proposed to ensure that the potential for buried remains to be encountered is addressed, and that other features within the site boundary are protected from accidental encroachment during construction.

10.10.2 No significant effects on the settings of any scheduled ancient monuments outwith the site are predicted.

10.10.3 Any potential effects upon settings are considered temporary, lasting only for the consent life of the turbine, and fully reversible upon decommissioning.



Sibmister

Figure 10.1

Sites of Historical Importance within 2km

- Turbine
- 2km Buffer
- Scheduled Ancient Monument
- Listed Building
- SMR w 2km

PROJECTION SYSTEM OSGB 1936 BNG	AUTHOR J HARPER
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