

# RWE

## Clachaig Glen Wind Farm

### Environmental Impact Assessment Report

#### Volume 2a

#### Main Report

## Chapter 12: Cultural Heritage

# 12. Cultural Heritage

## 12.1 Introduction

12.1.1 This chapter of the Environmental Impact Assessment Report (EIAR) identifies and assesses the potential effects that the Proposed Development, as described in Chapter 3 of this EIAR: Project Description, may have on the archaeological and cultural heritage resource of the study area. It also identifies the mitigation measures that will be implemented to prevent, reduce or offset potential adverse effects and/or enhance potential beneficial effects.

12.1.2 Potential effects on archaeology and cultural heritage are connected to a degree inter-related with effects on landscape and visual amenity and the surrounding forest and its uses. It should be noted that some of the setting effects may differ from assessments made in Chapter 7 of this EIAR: Landscape and Visual. This is because the landscape assessment considers wide-ranging landscape views, whereas the cultural heritage assessment considers the effect on the significance of individual assets.

## 12.2 Legislation, Policy and Guidance

12.2.1 The assessment was conducted within the context of the legislative and planning framework designed to protect and conserve heritage resources. Legislation, policy and guidance notes include:

- Ancient Monuments and Archaeological Areas Act 1979,
- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997,
- Historic Environment (Amendment) (Scotland) Act 2011,
- Historic Environment Scotland Act 2014,
- Planning Advice Note 2/2011 Planning and Archaeology,
- Scottish Planning Policy (Scottish Government, 2014),
- Scottish National Planning Framework 3 (Scottish Government, 2014), and
- Historic Environment Policy for Scotland (HEPS) (Historic Environment Scotland, 2019).

12.2.2 Relevant overarching planning policies for the Proposed Development are detailed in Chapter 6 of this EIAR: Planning and Energy Policy Context.

12.2.3 The relevant policies from the Argyll and Bute Local Development Plan (LDP) (adopted March 2015) to this chapter of the EIAR are:

- Strat 1 – Sustainable Development. This policy states that developers should demonstrate sustainable principles including conserving and enhancing the building environment by avoiding significant adverse impacts upon built heritage resources,
- Policy LDP 3 – Protecting, Conserving and Enhancing our Outstanding Environment Together. This policy states that a proposal for a development will not be supported where it does not protect, conserve, or enhance the character of the built environment in terms of its location, scale, form and

design, or where a development significant adversely affects, including cumulative effects, designated natural and built environment sites, and

- Policy LDP 6 – Supporting the Sustainable Growth of Renewables. This policy states that renewable energy developments will be supported where it can be demonstrated that there will be no 'unacceptable significant adverse impacts' upon the historic environment. Applications for wind turbine developments will be assessed against a set of criteria, including impacts on the historic environment (which includes Scheduled Monuments, listed buildings and their settings).

12.2.4 Further information and detail on matters relating to the built environment is provided in supplementary guidance adopted in March 2016. The policies relevant to archaeology and cultural heritage for the Proposed Development comprise:

- SG LDP ENV 15 – Development Impact on Historic Gardens and Designed Landscapes,
- SG LDP ENV 16(a) – Development Impact on Listed Buildings,
- SG LDP ENV 19 – Development Impact on Scheduled Ancient Monuments, and
- SG LDP ENV 20 – Development Impact on Sites of Archaeological Importance.

12.2.5 A number of other heritage policies (SG LDP ENV 16(b), SG LDP ENV 17, SG LDP ENV 18 and SG LDP ENV 21) are included within the supplementary guidance, however these policies are not relevant to the Proposed Development as they deal with types of development effects to heritage assets that are not a feature of the Proposed Development.

12.2.6 Guidance on the approach to the historic environment within the Argyll and Bute Council administrative area can be found within the Historic Environment Strategy 2015-2020 (Argyll and Bute Council and Historic Environment Scotland). This document, which had not been replaced at the time of writing in 2021, sets out a series of eight key objectives. Together, these provide a framework for the protection, conservation, management and interpretation of the historic environment to allow heritage to play a key role in economic and social growth and expansion in the region; and how to ensure that the heritage of the area continues to provide enjoyment to the local community.

12.2.7 The Argyll and Bute Local Development Plan 2 (LDP2) is currently in development and is due to be adopted in January 2022. As LDP2 is still to be examined, the adopted LDP remains the primary policy consideration. LDP2 contains the following proposed policies of relevance to this chapter of the EIAR:

- Policy 15 – Supporting the protection, conservation and enhancement of our historic built environment,
- Policy 16 – Listed buildings,
- Policy 19 – Scheduled monuments, and
- Policy 21 – Sites of archaeological importance.

12.2.8 The LDP2 policies, as they currently stand in draft form, do not represent a significant change to those in the LDP and Supplementary Guidance.

## 12.3 Methodology

### *Scope of Assessment*

12.3.1 This assessment examines recorded archaeology and built heritage within two defined study areas (see Paragraphs 12.3.5 to 12.3.6 below), as well as considering the potential for previously unrecorded archaeological remains within the Development Site. Heritage assets can include:

- Buried archaeological remains,
- Earthwork features,
- Features of cultural significance and importance,
- Built heritage, and
- Designated features, such as Scheduled Monuments, listed buildings, entries on the Inventory of Gardens and Designed Landscapes, entries on the Inventory of Historic Battlefields, and Conservation Areas.

12.3.2 Although the majority of the features recorded or identified as part of the study have some level of heritage significance, the importance of the assets can vary, as can the potential effect on the heritage assets. The assessment has considered direct, indirect and cumulative effects resulting from:

- Physical effects on heritage assets during construction,
- Effects upon the setting of heritage assets, and
- Cumulative effects on heritage assets.

12.3.3 Physical effects upon archaeological features and remains during construction could be caused by construction activities, such as excavation, construction of access tracks, construction of temporary works compounds and general groundworks.

12.3.4 Direct effects are those where there is a physical connection between the Proposed Development and the asset, whereas indirect effects require some additional pathway for the effect to arise.

### *Spatial Scope*

12.3.5 Two study areas were established to identify the cultural heritage assets. Firstly, an Inner Study Area of 1km from the main Development Site boundary, and 250m from the access track, has been defined in order to identify any previously recorded archaeological and cultural heritage assets both within the Development Site and in the immediate surrounding area (Figure 12.1). This search area is used to determine the archaeological potential, as there is the potential for similar types of remains to be present within it, but not currently recorded. It also helps to set previously recorded archaeological sites within their wider context.

12.3.6 The second, Wider Study Area 10km study area was also defined in order to identify assets which may be affected by the Proposed Development through change in their setting (Figure 12.2). The assessment of effects on setting utilised Zone of Theoretical Visibility (ZTV) data as a filter to determine which

designated and non-designated assets fall within areas from which the Proposed Development could potentially be visible. Assets which fall within the ZTV were reviewed to evaluate if the Proposed Development would be visible in practice (for example, to account for screening) and, if so, to assess if the predicated visual change would affect the significance of the asset. A full setting assessment has been undertaken on assets where setting contributed to the significance of the asset, to establish if the wind turbines within the Proposed Development would impact upon this significance. Whilst the ZTV has been used to guide the selection of assets for setting assessment, assets which fell outside of the ZTV were still considered within the assessment to ensure their setting did not include wider landscape views of, to or from the assets which would have the potential to be affected by the Proposed Development. Likewise, these assets were considered in so far as they contribute to the settings or group values of other assets within the assessment.

- 12.3.7 The study areas were agreed through the Scoping Opinion (see Appendix 5.2: Scoping Opinion, EIAR Volume 3); and through later West of Scotland Archaeology Service (WOSAS) feedback (see Table 12-4 below).

### *Temporal Scope*

- 12.3.8 The temporal scope of the Proposed Development is divided into temporary, long-term and permanent effects. Temporary effects are those that are caused during construction and decommissioning, such as effects on the setting of heritage assets caused by the presence of construction machinery. Long-term effects, although reversible on decommissioning, include effects on the setting of heritage assets caused by the presence of the Proposed Development in the landscape. Permanent effects can include the complete removal of heritage assets during construction of the Proposed Development.

### *Assessment Methodology*

- 12.3.9 The assessment methodology in this chapter is based on that set out in Chapter 2 of this EIAR: Approach to EIA. However, it is adjusted to take account of the specific guidance and standards for assessments relating to cultural heritage.
- 12.3.10 The assessment has been undertaken following the Historic Environment Scotland (HES) Environmental Impact Assessment Handbook (2018), Chartered Institute for Archaeologists (CIfA) Standards and Guidance for Historic Environment Desk-Based Assessment (2014) and HES's guidance on setting (2016).

### *Sensitivity*

- 12.3.11 The CIfA guidance on historic environment desk-based assessments requires an assessment of the heritage value of affected cultural heritage assets. This should include consideration of the archaeological, historic, architectural and artistic interests pertaining to the heritage asset. These criteria, in conjunction with professional judgement, have been used to assess the sensitivity (heritage value) of heritage assets.
- 12.3.12 The criteria for assessing the sensitivity of heritage assets are presented in Table 12-1.

**Table 12-1 Determining Cultural Heritage Sensitivity**

<b>Sensitivity</b>	<b>Examples</b>
High	<ul style="list-style-type: none"> <li>• World Heritage Sites,</li> <li>• Scheduled Monuments,</li> <li>• Category A listed buildings,</li> <li>• Inventory gardens and designed landscapes,</li> <li>• Inventory battlefields,</li> <li>• Historic marine protected areas,</li> <li>• Some conservation areas and non-designated assets that meet the relevant criteria for designation in the opinion of the assessor, and</li> <li>• Category B or C listed buildings where the existing designation does not adequately reflect their value, in the opinion of the assessor.</li> </ul>
Medium	<ul style="list-style-type: none"> <li>• Category B listed buildings,</li> <li>• Some conservation areas and non-designated assets of similar value in the opinion of the assessor, and</li> <li>• Category C listed buildings where the existing designation does not adequately reflect their value, in the opinion of the assessor.</li> </ul>
Low	<ul style="list-style-type: none"> <li>• Category C listed buildings,</li> <li>• Some conservation areas, and</li> <li>• Non-designated assets of similar value in the opinion of the assessor.</li> </ul>

12.3.13 Archaeological sites or features where the importance of the asset cannot be ascertained, or buildings with some hidden (namely inaccessible) potential for historic significance, will be noted as “unknown”. Sites with an unknown value cannot be assessed further.

12.3.14 Through the application of professional judgement, it may be that some sites may not fit into the specified category in Table 12-1. Each heritage asset is assessed on an individual basis and takes into account regional variations and individual qualities of sites.

**Magnitude**

12.3.15 The magnitude of change (or impact) resulting from the Proposed Development is assessed for each heritage asset independently of its archaeological or heritage significance (value). The magnitude of change categories are presented in Table 12-2.

12.3.16 Change to assets can be either direct or indirect.

**Table 12-2 Determining Magnitude of Change / Impact**

Magnitude	Adverse	Beneficial
Substantial	Changes to the fabric or setting of a heritage asset resulting in the complete or near complete loss of its cultural significance, such that it may no longer be considered a heritage asset.	Preservation of the asset in situ where it would be completely or almost completely lost in the do-nothing scenario.
Moderate	Changes to the elements of the fabric or setting of the heritage asset that contribute to its cultural significance such that this is substantially altered.	Changes to key elements of the asset's fabric or setting that result in its cultural significance being preserved, where they would otherwise be lost, or restored.
Slight	Changes to the elements of the fabric or setting of the heritage asset that contribute to its cultural significance such that this is slightly altered.	Changes that result in elements of the asset's fabric or setting that detract from its cultural significance being removed
Negligible	Changes to fabric or setting that leave significance unchanged.	

**Significance**

12.3.17 By combining the sensitivity of the cultural heritage resource with the predicted magnitude of change, the significance of the effect can be determined. This is undertaken in accordance with Table 12-3. The significance of effects can be beneficial or adverse.

**Table 12-3 Determining Significance of Effect**

Cultural Heritage Sensitivity	Substantial	Moderate	Slight	Negligible / None
High	Major	Major	Moderate	Negligible / None
Medium	Major	Moderate	Minor	Negligible / None
Low	Moderate	Minor	Minor	Negligible / None

*Note: Shaded boxes indicate a significant effect in terms of EIA.*

12.3.18 Notwithstanding the embedded mitigation measures established through design development, an assessment of the predicted significance of effect is made both prior to the implementation of mitigation and after the implementation of mitigation to identify residual effects. This first highlights where mitigation may be appropriate and then demonstrates the effectiveness of mitigation and provides the framework for the assessment of significance which takes mitigation measures into consideration.

12.3.19 When professional judgement is considered, some assets may experience a significance of effect that is different to that arising from the matrix in Table 12-3. In these instances, an explanation will be provided in the impact section.

## *Approach to the Assessment*

12.3.20 The assessment of archaeology and cultural heritage is qualitative. The desk-based research undertaken as part of the EIA included gathering data from the following sources:

- The West of Scotland Sites and Monuments Record (WoSAS),
- The Argyll and Bute Archives, Lochgilphead,
- Argyll and Bute Local History Headquarters, Dunoon,
- Local History Library, Lochgilphead,
- PastMap website and database ([www.pastmap.co.uk](http://www.pastmap.co.uk)) for the National Monuments Record of Scotland, Scheduled Monuments, listed buildings, Inventory of Gardens and Designed Landscapes, and Registered Battlefields,
- Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS),
- National Library of Scotland for plans and maps of the study area and its environs, and
- National Collection of Aerial Photographs (NCAP) archive, Edinburgh.

## *Site Surveys*

12.3.21 An archaeological walkover survey was undertaken as part of the 2016 EIA on the 27 January 2016. This was to examine the condition of recorded heritage assets and to assess the potential for previously unrecorded features. A setting assessment was also undertaken to assess the potential effect on the setting of heritage assets (where setting contributes to its significance). Ground conditions meant that the walkover survey was restricted to the north and eastern side of the Development Site. The survey was also restricted as the majority of the Development Site is covered in dense forestry, which limited access. Many of the sites considered for impacts on their setting were not publicly accessible and instead the closest point was assessed.

12.3.22 A follow-up setting assessment was carried out for the Proposed Development between 29 September and 1 October 2020. This was to assess the potential effects on the setting of heritage assets (where setting contributes to its significance) on assets falling within the ZTV as a result of the revised layout. Weather conditions were overcast and rainy. Many of the sites considered for impacts on their setting were not publicly accessible and instead the closest point was assessed.

12.3.23 An archaeological walkover survey for the Proposed Development was undertaken on 30 June 2021. This examined all turbine locations as well as access tracks and other associated works where access was available. As with the earlier surveys, access to much of the Development Site was difficult due to tree cover / plantations. However, where possible the plantations were entered to examine turbine locations, as well as confirm the presence / absence of previously recorded heritage assets.

## *Summary of Consultation*

12.3.24 Table 12-4 summarises the consultation conducted for the Proposed Development. It includes consultation responses which formed part of the Scoping Opinion attached to the 2016 EIA (related to the Consented Development), as well as more recent consultation responses directly relevant to the

Proposed Development, from the 2020 Scoping Opinion onwards. The older responses related to the 2016 EIA have been included in Table 12-4 as they are still deemed relevant for the current assessment.

**Table 12-4 Summary of Consultation**

Consultee	Summary of Consultation Response	Cultural Heritage Response
Historic Environment Scotland and WoSAS Scoping Opinion 2016	<p>Photomontages should be supplied from a number of viewpoints.</p> <hr/> <p>Viewpoints requested:</p> <ul style="list-style-type: none"> <li>• Dunan Mausdale</li> <li>• Cup marked boulder east of Low Clachaig</li> <li>• Rock art panels seat-southeast of North Beachmore</li> <li>• Category B listed Achamore House.</li> </ul>	Photomontages have been provided for all assets (see Cultural Heritage Viewpoint A to C and E respectively; EIAR Volume 2d)
WoSAS 2016 Consultation	WoSAS discussed methodology for assessing effects on cup and ring marked stones and noted that consideration should be given to the degree of change to the setting of cup and ring marked stones as appreciated by a non-specialist viewer.	AECOM agreed the scope of the assessment and the assets have been assessed (see Section 12.6)
Historic Environment Scotland Scoping Response 2020	<p>Recommended that the setting assessment paid particular attention to the following Scheduled Monuments: Low Clachaig, cup and ring marked boulders (1); North Beachmore, rock art panel (163); Dunan Muasdale (2); Killean fort (164); and St John’s Church, burial ground and carved stones (165); as well as the listed buildings at Killean: The Dolls House 182) and Killean House (178).</p> <p>They recommended that further assets for the setting assessment should be determined with reference to the ZTV, although noted that this should not be used in isolation to scope out assets, as there may be, for example, assets where the views from the asset do not include the Proposed Development, but views towards the asset are impacted. The rationale for excluding assets from detailed assessment should therefore be explained</p>	All assets were reviewed as part of the initial assessment, with a number taken forwards to full assessment (see Section 12.6).
	Visualisations should be used as part of the assessment, particularly in relation to	Both Dunan Muasdale (2) and Low Clachaig (1) were assessed as part of the

Consultee	Summary of Consultation Response	Cultural Heritage Response
	<p>Dunan Muasdale (2) and Low Clachaig cup marked boulder (1), where significant impacts seem most likely. The setting assessment should consider the appreciation, understanding and experience of the asset.</p> <p>HES advised that mitigation measures should include design interventions to avoid both physical and setting impacts to assets.</p>	<p>impact assessment and visualisations produced (see Cultural Heritage Viewpoints A and B respectively; EIAR Volume 2d).</p> <p>The rationale for the selection of assets for the assessment of setting is provided in Appendix 12.2 (EIAR Volume 3) which concludes with a list of assets which will be taken forward for setting assessment. This list includes all of the assets recommended by Historic Environment Scotland, with explanations as to why the scheduled monuments Killean Fort (164) and St Johns Church and associated burial ground and carved stones (165) were not taken forward to full setting assessment. Visualisations and photomontages from selected assets are also provided in Volume 2d and referred to within this EIAR chapter where appropriate.</p>
	<p>Early in the current assessment stage, WoSAS advised that due to the lack of access to their Historic Environment Record (HER), because of Coronavirus restrictions, they were unable to confirm details presented in the 2020 Scoping Report, but that the topics cited and the actions proposed appeared appropriate.</p>	<p>AECOM acknowledged the response and remained in contact with WoSAS throughout the scheme and obtained data in 2021 when access to the HER had been reinstated.</p>
<p>WoSAS Scoping Response 2020</p>	<p>WoSAS also noted that due to the lack of access to their GIS systems, it was not possible to confirm that the proposed study areas (both Inner and Wider Study Areas) for setting assessments were appropriate and requested that further consultation is undertaken when access is restored.</p>	<p>AECOM remained in contact throughout the scheme and WoSAS confirmed the study areas being examined were adequate by email on 25/06/2021.</p>
	<p>WoSAS stated that due to the wooded nature of the Development Site, it is expected that previously unrecorded assets may be present. They recommend a post-felling walkover and Light Detection and Ranging (LIDAR) assessment as potential avenues to</p>	<p>A watching brief will be undertaken during stripping, along with field survey after felling is complete as part of the mitigation strategy being developed (see Section 12.7).</p>

Consultee	Summary of Consultation Response	Cultural Heritage Response
	explore the unrecorded archaeology within the Development Site.	
WoSAS Consultation June 2021	<p>WoSAS replied to contact made by AECOM confirming that access to the HER had been reinstated.</p> <p>WoSAS replied to comments regarding potential physical impacts on shielings (29-34) resulting from an access track, and noted that they would like the remains to be avoided if possible.</p>	<p>AECOM undertook a revised HER search and had confirmation that the study areas being used for the assessment were adequate.</p> <p>The access track was redesigned to avoid the shielings.</p>
Argyll and Bute Council	<p>Requested that additional viewpoints were provided from the Scheduled Monument Dun Skeig (SM2491) and the Category A listed A'Chleit Church (S40). They also requested that consideration is given to the provision of new appropriate planting to protect and maintain the setting of the Category A listed Dolls Houses adjacent to the point at which the upgraded access track leaves the A83.</p>	<p>Visualisations of Dun Skeig and A'Chleit Church were conducted for the Landscape and Visual Assessment (Chapter 7 of this EIAR) and are found within EIAR Volume 2d as Viewpoint 05 and Viewpoint 14 respectively.</p> <p>Whilst included in the Landscape and Visual Assessment, an assessment of Dun Skeig was discounted from this cultural heritage assessment (see Paragraph 12.4.89 for further information). A'Chleit Church is assessed within this chapter (see especially Paragraph 12.6.39).</p> <p>The design to the track upgrade will result in no tree loss in the area immediately adjacent to the Dolls Houses.</p>

### *Limitations*

- 12.3.25 The majority of the Development Site is covered in mature forestry plantation which made access to some of the turbine locations difficult.

## 12.4 Baseline Environment

### *Topography and Geology*

- 12.4.1 The Development Site encompasses an area of land on the Kintyre peninsular near the small coastal settlements of Muasdale and Killean. The site is largely occupied by managed forest plantations, with a small area of open land to the north west and eastern parts of the site (Appendix 12.3 – Photographs 1-4; EIAR Volume 3). There is higher land in the east, south and north west of the Development Site, and lower ground to the west of centre associated with Clachaig Glen and Clachaig Water, the latter of which runs from the north east to the south west and continues onwards to meet the sea at Muasdale. The

Proposed Development is focused towards the north and middle of the Development Site, as illustrated through Figure 12.1 (EIAR Volume 2b).

- 12.4.2 A detailed overview of the bedrock, geological strata, geology and peat depths of the Development Site is available in Chapter 11 of this EIAR: Geology, Hydrology and Hydrogeology. The Development Site lies within an area of bedrock dominated by sedimentary rock, with metamorphic intrusions present across the area, as is one igneous intrusion. The majority of the Development Site comprises peaty gleys and peat. Blanket peat is noted over a sizeable area in the south of the Development Site, and the ridgeline to the east is indicated to comprise peaty gleys and peat.

### *Inner Study Area (1km from main site and 250m access track)*

- 12.4.3 There are 201 heritage assets in the Inner Study Area recorded on the RCAHMS online database, Pastmap, the WoSAS HER and the archaeological walkover survey.
- 12.4.4 The bracketed numbers after sites within the text refer to the numbers on Figure 12.1 (EIAR Volume 2b) and in Appendix 12.1 (EIAR Volume 3). Assets with no prefix relate to assets that fall within the study area for the main site and access track, while assets with an 'S' prefix are located within a wider 10km study area used for the setting assessment.
- 12.4.5 There are six Scheduled Monuments, within the study area for the Development Site and access track. Five of the Scheduled Monuments are prehistoric in date. The first is a stone, now split in half, which bears cup and ring marks (1). The second is an example of rock art panels that are in three areas but are grouped as one Scheduled Monument (163). There is also one dun, known as Dunan Muasdale (2), as well as a later prehistoric enclosure (3) that is a good example of settlement during this period, and the remains of a prehistoric fort north east of Killean (164). The remaining Scheduled Monument is the remains of the medieval St John's Church and burial ground (165). St John's Church (165), also known as Killean Chapel, was a Category A listed building until 2018 when its listed status was removed, leaving the asset as a Scheduled Monument only.
- 12.4.6 There are a further nine listed buildings in the study area. These are all focused on the small settlement of Killean. Four of the buildings are Category B listed and form part of the Killean Estate. Killean House (178) is listed along with its lodge, gate piers, wing walls and railings. Killean Home Farm is also listed in three individual parts (180, 184 & 185). Five further listed buildings fall within a grouping known as 'The Doll's House'. This grouping includes four Category A listed Arts and Crafts cottages which once housed the Killean Estate workers (181, 182, 183, & 186) and one Category B listed building which was once the school (179).
- 12.4.7 There are no World Heritage Sites, Registered Battlefields, entries on the Inventory of Gardens and Designed Landscapes or Conservation Areas within the Inner Study Area.

### **Prehistoric (to 43AD)**

- 12.4.8 There are 56 assets dated to the prehistoric period within the study area. Five of these assets are designated Scheduled Monuments (1, 2, 3, 163 and 164). The earliest evidence of activity in the study area is from the mid-Neolithic (3,000 BC) onwards.
- 12.4.9 In the wider district of Argyll, evidence has been found to suggest that people lived here as early as 11,000 BC, during the Upper Palaeolithic period. This was at the time of the last ice age, when most of Scotland would have been covered with glaciers. However, there would have been periods of warmth (interglacial periods) when parts of the ice sheets would melt and withdraw. Flint tools and waste flakes discovered in a cave at Kilmelford (approximately 80km to the north in Argyll) could suggest the movement of hunters following migratory herds during one of these warmer periods (Webb, 2013: 16).
- 12.4.10 There is more evidence of human activity in Argyll during the Mesolithic (10,000 to 3,500 BC). although no evidence has been identified within the study area. Work over the last twenty years in Scotland has identified a number of sites dating to the Mesolithic period, including several along the west coast. These include the site of Auchareoch on Arran some 30km to the southeast, as well as a concentration of sites on Islay approximately 25km to the north west (see Wickham-Jones, 1997). On the island of Oronsay, approximately 55km north west of the study area, six shell middens have been found (Mithen, 1999: 48, 53).
- 12.4.11 The Proposed Development is located on the Kintyre Peninsula, Argyll, which has a rich prehistoric landscape (Webb, 2013: 15) and includes rock art (for example, 1, 9, 12-14, 65 and 115).
- 12.4.12 There is one find spot of a possible ard recorded in the study area (42). Ards are rudimentary ploughs that date from the mid-Neolithic onwards and are related to the domestication of cattle (Sherratt, 1981: 293).
- 12.4.13 A partly polished mace head of pink stone has also been recovered from the study area (126). It likely dates from the late Neolithic / early Bronze Age (Whittle, 1999: 59) and the record notes that the top and bottom of the stone has been left rough.
- 12.4.14 There is also a record of a gold bracelet having been found in a rabbit hole in this area (113). The bracelet is believed to have dated from the Bronze Age but is now lost.
- 12.4.15 Thirty-eight of the assets are stones that bear cup and ring marks in various states of preservation. Two of the assets have been designated a Scheduled Monument on account of them being exceptionally fine examples of cup and ring marks (1 and 163), with the latter asset comprising a group of three rock art panels. This consists of a monolith and two rocky outcrops dating to between 3500 BC and 2500 BC. Argyll contains the greatest number of rock carvings within Scotland (Webb, 2013: 21). Notoriously difficult to date, they are often thought to be of the late Neolithic / early Bronze Age periods and accompany monument construction. These carvings can consist of simple cups etched into the stone, to complex patterns with cups surrounded by a number of rings and some with grooves linking them. The number of cup and ring marked stone found in the study area suggests that the area was heavily exploited by people during this time. The carvings are often found in open, high locations and this could

suggest that they were designed to have a view of the landscape from them (Parker Pearson, 1999, 91). It is further suggested that the more complicated designs often overlook the most productive soils in their localities.

- 12.4.16 There is a kerb cairn in the study area that potentially dates to the Bronze Age, although it is not dated on either the Canmore or WoSAS record entries (132). A kerb cairn is defined by a small mound surrounded by a kerb of stones which stand higher than the mound (Canmore 2020a).
- 12.4.17 In addition to the rock carvings and cairn, there is a find spot of a lithic with no further description (16), and a barbed and tanged flint arrowhead (7). The arrowhead can be dated to the early Bronze Age period. Though not definitive evidence for settlement, the finds clearly show the study area was exploited by people from the late Neolithic into the Bronze Age.
- 12.4.18 It is from the late Bronze Age (1,000 to 700 BC) into the early Iron Age (700 to 500 BC) periods that there is definitive evidence for settlement in the study area in the form of hut circles. Six have been identified (20, 108, 116, 133, 149 and 151). One of the hut circles (108) has a number of cairns (109) surrounding it, produced through field clearance. It is possible that they are contemporary with each other, although the cairns do not form field plots. Four of the hut circles can be found near to one another, possibly suggesting a small settlement or phases of rebuilding (116, 133, and 149). There does not appear to be field cultivation associated with the buildings, although early farming does not always leave evidence (Ritchie, 2011: 2).
- 12.4.19 The move into the Iron Age (700 BC to 450 AD) marked a change in the archaeological record in Argyll and Bute. Encounters of settlement sites become more frequent and there are fewer monuments to the dead. The Atlantic round house, characteristic of northern and western parts of mainland Scotland, the Northern Isles and the Hebrides, may have had its origins in Argyll (Gilmour, 2002: 65). There is also environmental evidence for woodland management in Argyll, and it is thought that some of this wood was used in construction of the round houses (*ibid.*, 65). It has been suggested that some of these Atlantic round houses, also referred to as duns or brochs, may have developed from smaller round houses encountered elsewhere during the late Bronze Age and Iron Age (*ibid.*, 57). There is one dun in the vicinity of the Development Site (2), though there are others in the wider area, outside of the 1km study area. Duns are thought to be of a defensive nature, often located in prominent locations, with suggestions that they were designed to be inter-visible with other assets in the local area, such as other duns or hut circles. Dunan Muasdale (2) is situated on a rocky knoll, slightly inland, circa 1km from the coast. The six other duns are positioned running down the west coast over a circa 4.5km length, and include Dun Domhnuill which is located on the coast immediately to the south of the study area. Their position along the coast suggests that there was a need to have a seaward view and, if contemporary (although there is no evidence of this), could be interpreted as some kind of defensive network.
- 12.4.20 The importance of the defended settlements in the Iron Age is further seen by the presence of hillforts, with a number recorded within the Argyll area, as well as elsewhere in Scotland, although none have been recorded within the study area.

- 12.4.21 The third Scheduled Monument within the study area is dated to the late prehistoric (3). It is a well-preserved example of an enclosed settlement, circular in shape and consisting of a stony bank with a gap representing the entrance. There is potential for remains to be found in the surrounding vicinity.

### ***Roman (43 AD to 450)***

- 12.4.22 There are no assets of Roman date recorded in the 1km study area. This is not surprising as Roman activity within Caledonia was limited and was mostly concentrated in the south of the country. Work associated with the preparation of the Scottish Archaeological Research Framework included a distribution map of Roman sites within Scotland (ScARF, 2012: 3). The map recorded Roman camps as far north as Elgin on the Moray coastline, as well as near Stranraer in southwest Scotland, and to the southeast of the study area. There is no Roman presence identified on the Kintyre Peninsula and there are no assets within the study area that date to the Roman period.

### ***Early Medieval (450 to 1066)***

- 12.4.23 Whilst there are no assets that date to the early medieval period recorded within the study area, a potentially early medieval tapered slab bearing crosses and crosslets in false relief was discovered at St John's Church Scheduled Monument (165) in Killean and taken to Campbeltown Museum.
- 12.4.24 The early medieval period in Argyll can be dated to 450 AD when the Gaelic kingdom of Dál Riata emerged on the western part of Scotland, then known as Pictland. Originally from Ulster, Ireland, the Dál Riata tribes, known as 'Scotti', began to expand into lands held by the Picts during the 5<sup>th</sup> century, including the peninsulas and islands that make up modern day Argyll. They established their capital at Dunadd hillfort, Kilmartin some 60km north of the Development Site (Lavin, 2011: 108). During the late 8<sup>th</sup> to early 9<sup>th</sup> centuries, the kingdom of Dál Riata experienced Norse invasions (ibid., 109). This pushed the Dál Riata tribes further into Pictish territories. It was in the middle of the 9<sup>th</sup> century when a king was installed to rule over both the kingdom of Dál Riata and the Picts. The Dál Riata king, Cinead (Kenneth) MacAlpin was named first king of Scotti (ibid.).
- 12.4.25 Gradual Norse settlement during the 8<sup>th</sup> and 9<sup>th</sup> centuries led to the diminishment of the Kingdom of Dál Riata in Argyll. Along the western coast there was a fusion of cultures as Gaelic, Pictish, Anglican and Scandinavian backgrounds mixed. For the people living here, pastoralism would have been the predominant agricultural activity with available land cultivated for crops to feed people and cattle during winter. Seafaring would also have been important as a way to maintain links for trade with Ireland and parts of England (James, 2009: 103). It was probable that at times, the islands and part of the mainland were under Norse control (Webb, 2013: 38).

### ***Medieval (1066 to 1500)***

- 12.4.26 There are three assets dating to the medieval period recorded within the main study area (19, 130, and 165). These include the site of St John's Church which is a Scheduled Monument (165).
- 12.4.27 The earliest surviving masonry in the Scheduled Monument of St John's Church, Killean (165) is in the nave which probably dates to the 12<sup>th</sup> century. The church is first recorded in 1222 and continued in use until it was abandoned in 1770. Early in the 13<sup>th</sup> century the original church was extended eastwards

with the addition of a chancel, whilst another addition was made probably during the course of the 15<sup>th</sup> century, by the erection of an aisle on the north side of the chancel. The MacDonald vault at the church now houses a collection of late-medieval grave slabs, including carved relief and effigies belonging to the Kintyre and Iona Schools of late-medieval West Highland art.

- 12.4.28 There are two non-designated assets within the study area that have been tentatively dated to the medieval period on the HER, one of which is an enclosure (19) and one the site of lazy beds (130).
- 12.4.29 The medieval period in Scotland is often described as turbulent (James, 2009: 103). On the islands and coastland of Argyll, there was a continued Norse presence. In 1158 AD, a new dynasty emerged under the leadership of Somerled, who by the time of his death in 1164 AD held the Isles and mainland of Argyll. His death led to civil war in the Isles as his sons fought for domination, resulting in the division of territories between three clans (James, 2009: 105). His descendants include the clans of Donald and MacDougall (Webb, 2013: 39).
- 12.4.30 The end of the 12<sup>th</sup> century saw the diocese of Argyll formed under the See of Dunkeld (Webb, 2013: 39) and a number of chapels were built, probably replacing earlier buildings (ibid., 41).
- 12.4.31 Through the 13<sup>th</sup> century, stone built, curtain walled castles were beginning to be constructed (Webb 2013, 39). This suggests the local economy was strong enough to support increasingly established and fortified settlements. The construction of these castles also emphasise that Argyll was a land in which territory and communication had to be held from strong bases, with the powerful families of the area vying for power (James, 2009: 83). Many of these castles were in prominent locations close to the seas and sea lochs, indicating their vital use as transportation and communication (ibid., 84). A chain of castles has been recorded to the north of the Inner Study Area, along the northern limit of the Kintyre peninsula (Webb, 2009: 41).
- 12.4.32 In the latter part of the medieval period, the wars of independence meant a power change in the Isles and Argyll. The Campbell clan, originally from the Highlands, emerged to become one of the most powerful clans in Scotland. They eventually dominated the lands of Argyll from the late 15<sup>th</sup> century, having been granted to the 1st Earl of Argyll, Colin Campbell, in 1481 (James, 2009: 119).
- 12.4.33 The two sites recorded in the study area, and tentatively dated to the medieval period on the HER, are both linked to agriculture. It has been suggested that the building of more permanent structures in the landscape indicates an increased dependence on pastoralism (James, 2009: 83), and an enclosure recorded on the north side of Clachaig Water could potentially be linked to animal husbandry (19). However, the occurrence of lazy beds (130) also suggests at least some form of arable agriculture taking place. Lazy beds are areas of agriculture, dug by spade, for the growing of crops including potatoes, oats and barley, and needed maintaining (Canmore 2020b). These were often used on a relatively local scale, allowing the crofters to grow some crops near the main settlement or farmstead, while the livestock were moved to the summering ground or shielings. However, it should be noted that such sites are difficult to date and have remained in use through to the 20<sup>th</sup> century, and as a result they might not be medieval.

12.4.34 While assets firmly dating to the medieval period in the study area are limited, St John's Church at Killean (165) and place-name evidence suggests that at least some of the settlements might have been in existence during this period. It has been suggested that the name Muasdale derives from the old Norse *munkr* meaning monk, with the suffix being topographical in nature (Rixson 2011: 156).

### **Post-Medieval (1500 to 1900)**

12.4.35 There are 132 heritage assets recorded within the study area that date to the post-medieval period, of which nine are listed buildings. The listed buildings are all located in and around the small settlement of Killean and include the main house (178), farm (180, 184, and 185), and workers cottages (181, 182, 183, and 186), as well as a former school (179). Most of the non-designated assets relate to agriculture, such as farmsteads (10, 107, 112, and 118), crofts (11 and 15), sheepfolds (17, 68 and 104), enclosures (105 and 106), a corn drying kiln (18) and shieling huts (22 to 41). Industrial assets include lime kilns (157, 162, and 190), a bloomery (159) and quarries (77, 89, 90, 139, 140 and 141).

12.4.36 Kintyre is marked as 'Argadia' on the historic map Regno di Scotia (Anon, 1558 to 1566). By the historic map of Scotiae Tabula in 1573 (Ortelius), the area is known as 'Cantyre'. There are a number of variations of 'Kintyre' seen through the 16<sup>th</sup> and 17<sup>th</sup> centuries, including 'Caintyr' (Hole, 1607).

12.4.37 Through the 16<sup>th</sup> century, the Campbell clan continued to exert their influence over other clans in Argyll. In Kintyre, tenants were turned out to be replaced by more loyal Lowlanders. Displeasure from other clans, such as the Donald's, manifested itself in multiple raids across Argyll, which became increasingly violent including destruction of settlements (James, 2009: 120). This could explain why early medieval to early post-medieval settlement is hard to detect within Argyll. The Scottish civil war in 1644 exacerbated such raids, including burning of settlements, murder, destruction of crops and the killing of cattle (ibid, 121).

12.4.38 The A83 road which runs alongside the Development Site is of some antiquity and is first clearly marked on the Roy's Military Survey of Scotland in the 1750s, although traces of a road are visible on earlier surveys, including the Robert Gordon survey dated between 1632 and 1652. It connects the Isle of Kintyre to the mainland of Scotland and runs down the western side of the peninsula before crossing south east to end at the town of Campbeltown.

12.4.39 The Robert and James Gordon survey, although limited in accuracy, also depicts a number of place-names that can be traced on the modern landscape. These include Muasdale located to the west of the Development Site, which is named *Mungastel*.

12.4.40 Roy's Military Survey of Scotland also identifies Muasdale, with its name recorded as 'Muistill'. This name is subject to a number of variations marked on the historic maps, including 'Mungastil' on Blaeu's map from 1654, 'Muastill' on Kitchin's map from 1773 and 'Muasilil' on Campbell's map from 1794. It is on Black and Black's map of 1862 that the village is marked as 'Muasdale' for the first time.

12.4.41 While Muasdale is the only village that survives, many of the farmsteads that surround the Development Site are also recorded on the Roy survey. These include *Clachaig* (Low Clachaig), Crubasdale, and *Taynabanach* (North Crubasdale). Roy also marks two clusters of buildings, with the most southerly

named as *Archaglass* which appears to lie within the Development Site and corresponds with Achaglass. It seems highly likely that assets 15 and 18 to 19 relate to this settlement. The other cluster, which is just to the north of Achaglass, is unnamed on the Roy survey, but seems to correspond with Achahoirk and its associated remains (10 and 11). The Langlands survey published in 1793 provides a little more detail and names the two small settlements within the Development Site, namely Achahoirk (10 and 11) and Achaglass (15 and 18 to 19). The survey also names a third settlement within the Development Site, this being *Glenclachaigheioch* to the east of Achaglass, and this site is in the area of shielings and other agricultural remains recorded to the south east of Turbine 7 (44 to 63 and 68).

- 12.4.42 The survey also names the house occupied by Alexander MacAllister which seems to relate to the ruined house near the Development Site at High Clachaig (117), as well as Clachaig Mill. This latter site might relate to Low Clachaig (124).
- 12.4.43 The historic maps show open countryside in the area of the Development Site with very few trees or plantations. Roy shows improved land, possibly under arable cultivation, on the western side of the site, while the land within the boundary appears to be unimproved land. These unimproved uplands were used by the population for grazing purposes. The export of cattle and hides in the 17<sup>th</sup> and early 18<sup>th</sup> centuries became increasingly popular and settlements increased as farms split and new ones moved on to old shieling grounds (James, 2009: 125). Documentary evidence for the area is limited, although surviving archaeological remains and comparisons with other similar landscapes suggests that the main settlements were concentrated on the lower land, with the upland areas used for transhumance. This practice involved the movement of livestock to the higher ground during the summer months, enabling the population to exploit the grazing available and protect the cultivable land that existed in the lower areas (Whyte, 1999: 266). This explains the large number of farmsteads and shieling huts within the study area which became increasingly valuable during this period. One croft (15), with rig and furrow in the vicinity, is situated not far from a medieval enclosure (19). This could suggest continued use of the land by a family or tenants. The shielings are often found in clusters, for example within the Development Site, there is a group of 18 hut foundations recorded in one area (44 to 62).
- 12.4.44 The late 18<sup>th</sup> and early 19<sup>th</sup> century is characterised by extensive agricultural reforms which led to land clearances (Webb 2013, 53). The clearances were usually to make way for new sheep farms, which meant a smaller number of people were needed to be employed in places that had previously supported four to eight families (James, 2009: 129). The sheepfolds recorded in the study area are evidence of this change in land use (17, 68, 104 and 160). The depopulation left hundreds of shielings and crofts in ruins (for example, 11, 22, 41, 43 to 63, 71 and 103) (Webb, 2013: 54), and in many cases the sheepfolds recorded in the upland landscape are located in areas previously occupied by farmsteads or shieling grounds.
- 12.4.45 While there are no post-medieval churches within the study area, the Category A listed church of Killean and Kilchenzie Kirk A'Chleit is located on the coast immediately to the west of the study area. It was built in 1787 by local builder Thomas Cairns, replacing an older structure, and is shown on the 1<sup>st</sup> and 2<sup>nd</sup> editions Ordnance Survey (OS) maps. The 3<sup>rd</sup> edition OS map marks it as a church school. Records suggest that there may have once been a further chapel or church at Kilmory (125), although no evidence has been identified to support its potential location.

- 12.4.46 High Clachaig House is an 18<sup>th</sup> to 19<sup>th</sup> century building which is now in ruins (117). It is thought to have belonged to the MacAlister, lairds of Clachaig, a branch of the Donald clan, and is depicted on the Langlands survey published in 1793. The HER report states that it was never completed due to the death of the owner. Thomson's map from 1824 may show this site. The map shows that Clachaig Water was diverted, something which is confirmed by the aerial photographs (see Paragraphs 12.4.66 to 12.4.69). The map also shows clusters of trees suggesting that this area did have some plantation and was not all uninhabited upland.
- 12.4.47 The site of the former Killean House (189), which burnt down, is also recorded within the study area on the first edition OS map.
- 12.4.48 Through the 18<sup>th</sup> and 19<sup>th</sup> centuries, industrialisation on a large scale took place, although this was focused in the more urban areas. Industrial sites within the study area are limited, but include a bloomery, a primitive forge used before the blast furnace was developed (159). This bloomery is most likely dated to the post-medieval period, when a number of small-scale sites developed as a result of the abundance of timber in Kintyre / Argyll (Duncan 2006, 165-166). Demand in the lime industry also increased as a result of land improvement and building. There are two lime kilns within the study area which were probably used both in the building trade and for agricultural use (157 and 162) (Whyte, 1999: 273). There are also eight quarries recorded, marked as disused. In the 16<sup>th</sup> and 17<sup>th</sup> centuries, quarrying had been a widespread, small scale activity. The rise in demand for stone and slate meant quarrying became more specialised and localised (ibid, 274).
- 12.4.49 The First Edition Survey map of Scotland provides the first detailed mapping of the area and records a number of the settlements noted on earlier surveys as still in existence in the late 19<sup>th</sup> century. These include Glencloichageoidh (44 to 63 and 68) and Achaglass (15 and 18 to 19). Sheep enclosures are depicted at Achahoirk (10 and 11), although the site is not named, suggesting the settlement may have been abandoned by the time of the survey.
- 12.4.50 The Survey Atlas of Scotland (Bartholomew, 1912) used the census to record the population of Argyll from 1801 to 1911. It was found that there was a growth in the population density of Argyll until 1831, when it reached its highest at 100,973. From then, there was a steady decrease and by 1911, the population density was 70,901 (Bartholomew, 1912: 15). This could be explained by the industrial revolution which caused mass movements of people to leave agricultural areas and move into urban areas for work, as well as the clearance of uplands during the agricultural revolution.

### ***Modern (1900 to present)***

- 12.4.51 There is one asset that dates to the modern period, an aircraft wreck (69).
- 12.4.52 In 1912, the maps record the land of Kintyre as moorland hill pasture and other uncultivated lands. The Development Site is also marked as uninhabited, or not inhabited constantly throughout the year. The coastline to the west of the Development Site is recorded as having 1 to 64 persons per square mile (Bartholomew, 1912: plate 13).

- 12.4.53 Although assets dating to the modern period are limited, the opening years of the 20<sup>th</sup> century continued to see a population based on agriculture. This continued to form a major part of landscape use in the study area until the second half of the 20<sup>th</sup> century when large scale forestry was established in the area. As a result of this, the majority of the study area, and most of the land available for turbine development, is now occupied by forestry plantations.
- 12.4.54 The recorded aircraft wreck was that of a Blenheim Z6350 which hit a hillside in fog whilst trying to land on 21 December 1941 (69). It ran out of fuel on its way to a training exercise on the island of Tiree, circa 123km north west of the study area. There were no survivors of the crash (Kelly, 2005: 225).
- 12.4.55 The later OS maps show no new features which have not already been recorded from earlier editions, suggesting little change to the study area.

### *Unknown*

- 12.4.56 There are 11 undated assets in the study area. Four cairns, three of which are summit cairns (76), including a pair in one location (91) and a possible marker cairn (70), and one example of a cairnfield (130). These cairns, marking either the summit of hills or, possibly, tracks, are hard to date. They could be clearance cairns from the medieval period or a modern phenomenon whereby fell walkers emphasise those already present or created new ones by adding stones to them over time.
- 12.4.57 There are four enclosures (19, 102 and 105) and two earth banks (101) that remain undated and no further information is available. Without excavation, it is difficult to assign a period as they could date to any period from the late prehistoric onwards.
- 12.4.58 There is one standing stone, reported to be unlikely of antiquity, which could be a rubbing stone (129). Another stone, standing alone, is likely to be the remnant of a destroyed wall which could date from the medieval period onwards (137).
- 12.4.59 There is an ambiguous report of the recovery of human remains from a mound (135). However, there is no further information and later reports suggest the mound is natural.
- 12.4.60 Finally, there is one report of a burnt mound, although there is no further information (132). Again, without further investigation, the date of this site is uncertain.

### *Site Survey*

- 12.4.61 An archaeological walkover survey was undertaken for the 2016 EIA on the 27 January 2016. The walkover survey was undertaken on the land identified for the proposed turbines, access tracks, and other associated infrastructure and surrounding areas which were accessible. The majority of the Development Site is covered in dense forestry and as a result the walkover survey was further limited, with only the land free from forestry examined. The locations of the southern turbines (11 to 14) were not examined due to health and safety reasons owing to the nature of the landscape and saturated ground conditions. The locations of Turbines 1, 3 and 4 were also not examined as access was not possible.

- 12.4.62 No archaeological features were identified as a result of the recorded heritage assets being located in thick forestry, where access was not possible.
- 12.4.63 A second archaeological walkover survey was undertaken on 30 June 2021 and this was based on the Proposed Development. All turbine locations were visited as part of the survey, with the exception of Turbine 13 due to restricted access. As with earlier surveys, access was difficult at times due to the thick / mature plantations that cover large areas of the Development Site, as well as boggy ground conditions.
- 12.4.64 The walkover survey recorded one additional asset. This was a rock outcrop in the north western section of the Development Site, and to the south of Turbines 1 and 3, with a number of cup marks on the southern face (177) (Appendix 12.3 – Photographs 5 & 6, EIAR Volume 3). Attempts were also made to locate a number of pieces of previously recorded rock art near Turbine 10 (6 & 14), but these were not identified and it is assumed they may have been moved / lost during forestry operations, or that they were not visible due to ground cover or inaccurate grid references.
- 12.4.65 The walkover survey also noted that the majority of post-medieval agricultural remains recorded within the Development Site survive well, with most forestry planted to avoid remains. These include Achahoirk Farmstead and associated features near Turbine 10 (10 & 11) (Appendix 12.3 – Photographs 7 & 8, EIAR Volume 3), as well as a series of structures recorded on the HER as a sheepfold, but probably representing the farmstead / small settlement recorded on historic mapping as Glencloichageoich (68). The remains of the shieling near the access track to Turbine 13 were also observed as surviving as earthwork (29-34) (Appendix 12.3 – Photographs 9 & 10, EIAR Volume 3).

### *Aerial Photographs*

- 12.4.66 A review of aerial photographs held by the RCAHMS, now the NCAP Archive, was undertaken in April 2013 with photographs from 12 sorties dating from 1947 to 1988 examined. Details of the photographs reviewed can be seen in Table 12-5.

**Table 12-5 Aerial Photographs**

<b>Sortie</b>	<b>Camera Position</b>	<b>Frame(s)</b>	<b>Date</b>
CPE_UK_0278	V	3087-3100	25/08/1947
CPE_UK_0278	V	3182-3189	25/08/1947
CPE_UK_0278	V	4090-4098	25/08/1947
CPE_UK_0278	V	4196-4198	25/08/1947
OS_75_070	V	23-26, 37-40	06/05/1975
OS_75_095	V	89-91, 103-106	16/05/1975

- 12.4.67 The aerial photographs show the Development Site pre-plantation. Most of the area consists of large open fells and uplands (OS\_75\_070). A number of assets can be identified and are linked to the agricultural and land management associated with the post-medieval period. The most notable change

in the area is the transition from open hillside, which survived until the mid-1970s, to when the land was prepared for the plantations that currently exist in the area.

- 12.4.68 There are a number of farmsteads shown on the photographs. Three can be seen around Clachaig Water with a further farmstead to the south. There are also ruined farmsteads shown with associated enclosures. One early photograph also shows a large enclosure across a stream, which has since been diverted to enable the plantation to be put in place (CPE\_UK\_0278).
- 12.4.69 There are the remains of a shieling in the area and other recorded structures, although their function is not clear (CPE\_UK\_0278). These features are included Appendix 12.1 (EIAR Volume 3).

### *Archaeological Potential*

- 12.4.70 There are 74 heritage assets within the main Development Site, as well as two assets within the access track boundary, including Neolithic rock art, Iron Age hut circles and post-medieval shieling huts.
- 12.4.71 These examples show the landscape has been heavily exploited from the prehistoric onwards, highlighting the change in the use of the landscape and importance of agriculture, although it should be noted that most of the Development Site has been heavily disturbed through works associated with 20<sup>th</sup> century forestry operations. These include ground disturbance associated with planting and harvesting trees, as well as the construction of existing access tracks, turning areas and borrow pits.
- 12.4.72 Table 12-6 summarises the current visibility of archaeological sites within the study area and the predicted likelihood of further discovery.

**Table 12-6 Predictability of Sites**

<b>Period</b>	<b>Visibility of Assets</b>	<b>Presence / Absence</b>	<b>Likelihood of further discovery within Development Site</b>
Prehistoric	Good – Remains still present and good cartographic coverage.	Present – Frequent	Low / Medium
Roman	Absent	Absent	Low
Early Medieval	Poor	Present – Limited	Low
Medieval	Limited	Present – Limited	Low
Post-Medieval	Good – Remains still present and good cartographic coverage.	Present – Frequent	Low

- 12.4.73 There are extensive remains dating to the prehistoric periods with a number of examples of rock art (for example, 4, 14, 65, 115 and 144), as well as a Bronze Age arrowhead (7). The number of prehistoric assets recorded suggests that the Development Site was certainly exploited in the Bronze Age and Iron Age. One find spot (42) is part of an ard or plough, indicating that people were settling and exploiting

their surroundings. The rough nature of the landscape, the extensive woodland coverage, and the lack of archaeological work undertaken in the area means that there could be further prehistoric remains in the Development Site, although large areas of the site have been disturbed through episodes of planting and felling. As such, this potential level is considered to be medium in the northern section of the site, which is undisturbed open moorland, and low in areas of forestry plantation.

- 12.4.74 Roman activity in the north of Scotland is limited and no sites dating to this period have been recorded within the Development Site. The lack of Roman activity in this area means that the potential for discovering previously unrecorded Roman assets is considered to be low.
- 12.4.75 Evidence for settlements and associated activities during the early medieval period is also poor, with no sites recorded within the study area. This could be due to medieval and post-medieval activity covering or destroying earlier assets, although such identification is difficult. Features linked to the seasonal use of pasture would be relatively ephemeral, with many lost due to later forestry plantation works. As a result of this limited evidence, the potential for further discoveries dating to the early medieval period is considered to be low.
- 12.4.76 There are three assets that have been tentatively dated to the medieval period identified within the Development Site. This includes an enclosure (19) and lazy beds (130), as well as St John's Church (165). While this indicates that the area was utilised in the medieval period, there is little to suggest extensive use of the area. While some evidence of medieval date may be located, the potential for discovering new sites dating to the medieval period is considered to be low.
- 12.4.77 The largest number of recorded assets date to the post-medieval period, with assets associated with agriculture, such as shielings (44 to 62) and farmsteads (118, 124, and 128), which are well documented. Assets are located throughout the lowland areas of the study area, with shieling huts concentrated in the upland sections, suggesting extensive exploitation of the landscape. However, as the landscape represents a relatively harsh upland area, with much now covered in woodland, the potential for discovering previously unrecorded post-medieval remains is considered to be low.

### *Wider Study Area (within approximately 10km)*

- 12.4.78 The Proposed Development is within a Wider Study Area described as upland forest-moor mosaic. The topography of this wider study area consists of plateaux with rounded ridges and craggy outcrops, upland lochs and winding narrow glens and wider river valleys. There are extensive commercial forestry plantations covering these upland areas, with open moorland covering any remaining land. There are no field boundaries.
- 12.4.79 There is little settlement, and that which exists is mainly in the form of isolated dwellings and farmsteads, with some villages. Access is restricted as the roads typically follow the shorelines, rather than going across the upland plateaus.
- 12.4.80 Heritage assets within approximately 10km of the Development Site were considered for impacts on their setting. This search included Scheduled Monuments, listed buildings, entries on the Inventory of Gardens and Designed Landscapes, entries on the Inventory of Historic Battlefields and Conservation

Areas. Non-designated sites on the HER and within the 10km study area were also assessed at the request of WoSAS. Designated assets recorded with 10km of the Development Site are shown on Figure 12.2 (EIAR Volume 2b).

- 12.4.81 The ZTV as shown in Figure 12.3 (EIAR Volume 2b) was used to aid the assessment process. All assets which fell within the ZTV were initially taken forward for further assessment; however, following an initial assessment process some assets within the ZTV were determined to be well screened or found that their setting did not contributing to their significance and as such were not taken forward. Further details can be found in Appendix 12.2 (EIAR Volume 3).
- 12.4.82 Assets which fell outside of the ZTV were considered to ensure their setting did not include wider landscape views which would have the potential to be affected by the Proposed Development. No assets outside of the ZTV were considered to have a wider setting which would be affected by the Proposed Development; they were therefore not taken forward for further assessment. A list of assets which fall outside of the ZTV and not assessed further is included in Appendix 12.2 (EIAR Volume 3).
- 12.4.83 Assets identified by HES in their consultation responses through the Scoping Opinions for both the Consented and Proposed Developments (for the latter, see Appendix 5.2: Scoping Opinion; EIAR Volume 3) were reviewed and the following assets were determined to be unaffected by the Proposed Development due to a lack of intervisibility, or because their wider setting is not affected:
- Beachmeanach enclosure (SM 3659),
  - Garvalt dun (SM 3740),
  - Dun Domhnuill (SM 3092),
  - Killean church and tombstones (SM 3030),
  - Killean fort (SM 3179),
  - Killean House (Listed Building Category A, 178), and
  - Killean, The Doll's House Cottages (Listed Buildings Category A, 181, 182, 183, 186).
- 12.4.84 A number of these assets, particularly those at Killean, have, however, been considered as part of the assessment of the upgraded access track. See paragraphs 12.6.8 to 12.6.11 below for further discussion.
- 12.4.85 Assets within the ZTV comprise 21 Scheduled Monuments, eleven listed buildings, one entry on the Inventory of Gardens and Designed Landscapes, and 167 non-designated assets within 10km. In addition to these, 509 non-designated assets on the WoSAS HER were found to fall within the ZTV. While the majority of these are located on the mainland, a number are situated on the Isle of Gigha some 4km west of the mainland.
- 12.4.86 These assets were further examined and the assessment of the effects from the Proposed Development on their setting was only conducted where setting contributed to the asset's significance. These are shown on Figure 12.3 (EIAR Volume 2b).

- 12.4.87 A list of discounted assets is included in Appendix 12.2 (EIAR Volume 3). Sites considered for the setting assessment comprise 12 Scheduled Monuments comprising:
- Duns (2, S1 to S3, S8 and S9);
  - Cup marked boulders and rock art panels (1 and 163);
  - Cairns and standing stones (S4, S5 to S6 and 21); and
  - The remains of an old parish church (S7).
- 12.4.88 There is one entry on the Inventory of Gardens and Designed Landscapes at Achamore House (S15). Within this estate there are two Category B listed buildings, Achamore House (S10) and a gate lodge and gate piers (S14). There are a final four listed buildings, or groupings of listed buildings. These are Killean and Kilchenzie Parish Church, A' Chleit (S40) which is Category A listed; Cara Chapel and Cara House (S11), and Gigha and Cara Parish Church (S13), both Category B listed; and Kilchattan burial ground, boundary wall and gateways (S12) which is Category C listed. There are 50 non-designated assets which consist of cup and ring markings (for example, S23, S33, S58, S67 and S88).
- 12.4.89 Of these assets, Kilchattan burial ground, boundary wall and gateways (S12) and the carved stone (S7) have not been assessed further. The site visit determined that there would be no effects on these assets. Dun Skeig (SM2491) was also discounted from a heritage point of view after a site visit, as it was considered that the distance between the scheme and the asset (approximately 15km), as well as limited views resulting from intervening topography and tree cover, would result in minimal impacts on the setting of the asset. This asset has also been assessed as part of the Landscape and Visual Impact Assessment (see Chapter 7 of this EIAR: Landscape and Visual; and in particular Viewpoint 4 (EIAR Volume 2d) which illustrates the minimal effect of the Proposed Development on Dun Skeig).

## 12.5 Embedded Mitigation

- 12.5.1 The iterative design process of the Proposed Development detailed in the Design Statement, commenced prior to the EIA process, with viewshed analysis undertaken during the site finding phase taking into account designated heritage assets. This process continued throughout the EIA process for both the Consented Development and Proposed Development, with cultural heritage features being avoided where possible when siting the Proposed Development's components, including the turbines, associated infrastructure and access tracks. This has been achieved through creating exclusion zones on Development Site mapping of both desk-based records and those features recorded during site surveys.
- 12.5.2 A recent example followed the walkover survey on 30 June 2021 when it was found that there would be possible impacts on an area of shielings (29-34) resulting from the proposed access track near the south of the Development Site. This potential adverse impact was discussed initially with WoSAS who requested that the access track be moved to avoid physical impacts if possible. This was then discussed with the access track designers and Applicant and the track was moved to avoid impacting the shielings.
- 12.5.3 The impact of the Proposed Development on the wider setting has also been a key consideration during the iterative design process, with the design being altered to reduce setting impacts where possible.

- 12.5.4 Prior to construction and decommissioning, a traffic management plan will be put in place to limit traffic movements and a Construction Environment Management Plan will be created to ensure good practice construction methods are employed on site. These will aim to reduce the noise and dust created through construction and decommissioning, which could otherwise have a temporary impact on the setting and ambiance of heritage assets.

## 12.6 Assessment of Effects

### *Impact Assessment*

- 12.6.1 An impact is defined as a change resulting from the Proposed Development on the significance of a cultural heritage resource. During the construction and operation of the Proposed Development the following types of impacts can be anticipated:

- Physical impacts upon archaeological features during construction,
- Impacts upon the setting of heritage assets during construction / decommissioning, and
- Impacts upon the setting of heritage assets during operation.

### *Construction*

- 12.6.2 Physical impacts upon the archaeology could be caused by the following construction activities:

- Felling of forestry / site clearance,
- Excavation and construction of the turbine and met mast foundations,
- Construction of the new forest roads and upgrade of existing tracks,
- Possible creation / excavation of borrow pits,
- Creation of construction compounds, and
- Construction of the substation and other associated infrastructure, such as installation of underground cabling.

- 12.6.3 There are 74 heritage assets recorded within the Development Site, as well as two assets on the line of the upgraded access track (see Figure 12.1; EIAR Volume 2b). Although these are located within the Development Site, there will be no physical impacts on any due to site design and the consequent positioning of the turbines, access tracks, and other associated infrastructure to avoid these known assets.

- 12.6.4 There is the potential for previously unrecorded archaeological sites to be identified during excavation of access tracks, pads for the turbines and other associated infrastructure, although the potential is considered to be low in areas currently occupied by plantations due to the disturbance caused by planting, as well as previous episodes of felling. This potential is likely to be limited to evidence of prehistoric and later agriculture and therefore the sensitivity of such remains is considered to be no more than Low. The magnitude of change is judged to be High and therefore the significance of effect before mitigation is judged to be **Minor adverse**. In EIA terms this is considered to be '**Not Significant**'. The exception would be if additional cup and ring marked stones were discovered within the Development

Site. These could be of Medium sensitivity. With a magnitude of change of High, the significance of the effect before mitigation is considered to be **Moderate adverse**. In EIA terms this is considered to be **'Significant'**.

- 12.6.5 As well as the potential effect on archaeological deposits, construction activities may also affect the setting of heritage assets. Crane booms would be working within the Development Site during the construction period and it is possible that there would be temporary setting impacts from this. As no part of the crane would be taller than the turbines operational tip height and would be in place for a short time span, these impacts would be no greater than the setting impacts from the operational turbines and can therefore be assessed and mitigated in the same way. The crane boom therefore constitutes a Low adverse temporary magnitude of change on the setting of heritage assets of High sensitivity, which is judged to be, at worst, a **Minor adverse** significance of effect. In EIA terms this is considered to be **'Not Significant'**.
- 12.6.6 The upgraded access track will link the Development Site to the A83. The track follows the line of the Kintyre Way and currently provides access to the forestry and the Deucheran Hill Wind Farm. To allow access to the Proposed Development, the existing access track will be widened and improved in some places to allow access (see Chapter 3 of this EIAR: Project Description).
- 12.6.7 Within the line of the access track and the maximum extent of the widening area, the location of two heritage assets are recorded, both of which are quarries (139 & 140). The exact purpose of the quarries is unknown; although it is likely they were intended for the extraction of limestone or building stone. It is also likely that the quarries were lost during the construction of the existing trackway. These assets are considered to be of limited historical significance and have a Negligible sensitivity. The widening of the track way would constitute a High permanent magnitude of change on the quarries. On assets of Negligible sensitivity, this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be **'Not Significant'**.
- 12.6.8 Construction activities associated with creation of the access from the A83 may also affect the setting of the listed buildings at Killean. The Killean Estate is composed of a collection of distinguished late 19<sup>th</sup> century buildings of architectural styles. Killean House (178) is a large asymmetrical mansion with a mixture of French, English and Scottish late Gothic and Early Renaissance motifs. Killean House was built for James Macalister Hall of Tangy and Killean, who purchased the estates in 1873 and 1875 respectively. The old house at Killean had stood on the site of the garden cottages and was burned whilst under reconstruction in 1875.
- 12.6.9 The Doll's Houses (181, 182, 183, and 186) are Arts and Crafts buildings built to house workers on Killean Estate. Collectively they all form an important group with the school (179), steading (180, 184, and 185) and ruined medieval church and lodge, which is no longer a listed building, but still retains its scheduled monument status (165).
- 12.6.10 The orientation of the buildings on the Killean Estate and the attention to detail of the buildings demonstrate a conscious effort to ensure that they are architecturally and aesthetically appealing and denote the success and wealth of the estate. The different uses of the buildings demonstrate the social hierarchy within the estate and are more widely illustrative of late 19<sup>th</sup> century society. The listed

buildings are reliant on each other to provide an overall experience of the estate and their setting. Killean House is not immediately visible as it nestles within wooded enclave, glimpses of it are visible from within the trees. The location next to the sea and at the edge of the rising topography adds drama and a juxtaposition and contrast to the architectural orderliness of the Killean Estate.

- 12.6.11 During construction, with traffic working on the improvements to the access track at the western end, it is possible that there would be temporary setting impacts on five of the listed buildings (178-186) which are of architectural and historic significance and assets of High sensitivity. This impact would be limited to the period of the programme when work is being undertaken adjacent to the A83. The improvement works adjacent to the listed buildings constitutes a Negligible temporary magnitude of change on the setting of heritage assets of High sensitivity, which is judged to be, at worst, a **Minor adverse** significance of effect. In EIA terms this is considered to be **'Not Significant'**.

### *Operation*

- 12.6.12 As noted above in Section 12.5 'Embedded Mitigation', an iterative design process has already served to reduce the setting impacts where possible. The impacts and resultant effects discussed in this section are all assessed without reference to any additional mitigation, such as archaeological fieldwork, the need for which is discussed in a later section of this chapter.
- 12.6.13 The main potential effects resulting from the presence and operation of the Proposed Development are linked to the setting of heritage assets. A search of designated and non-designated sites which fell within ZTV data for both the Inner 1km study area and the Wider 10km study area, and whose setting may contribute to their significance, returned 68 assets (see Paragraphs 12.4.78 to 12.4.89). These sites were visited where possible as part of the original walkover survey and setting assessment in 2016, as well as the revised setting visit in 2020. Due to the nature of the assets, some were visited as a group as part of the setting assessment. Potential setting effects have been identified on 59 individual assets.

### *Dunan Muasdale (2) (see Cultural Heritage Viewpoint A (EIAR Volume 2d))*

- 12.6.14 The Scheduled Monument of Dunan Muasdale, a prehistoric dun which was used for domestic and defensive purposes, survives as well-preserved earthworks. It is of archaeological significance as archaeological investigation could provide further information linked to its development and the use of the prehistoric landscape for defensive purposes. It is also of historical significance as a result of its role in the development of land use, activity and settlement in the area.
- 12.6.15 The setting of the dun comprises open agricultural land. It is located on a slope which rises to the south away from the valley bottom. It is located in an elevated position which commands views around the surrounding landscape and it is likely that there are views from it to other coastal duns. Because of this, its setting contributes to its significance, although it is primarily of significance for its archaeological and historic importance. It is considered to be of High sensitivity due to its designation as a Scheduled Monument.
- 12.6.16 Dunan Muasdale is located approximately 2.2km to the southwest of the nearest proposed turbine (Turbine 14). The ZTV indicates that all 12 turbines will theoretically be visible from the Scheduled

Monument. However, the photomontage (Cultural Heritage Viewpoint A (EIAR Volume 2d)) demonstrates that for four of these, only the blades or tips will be visible. Views to the east from the dun will be impacted by the addition of these turbines, although the wide-ranging views in other directions, including those towards other recorded coastal duns, will remain unaffected. Cultural Heritage Viewpoint A (EIAR Volume 2d)) also shows that the view of the turbines is confined to the low point on the hillside, which helps to limit the Proposed Development's visual prominence. Views beyond the Proposed Development are also still possible. The archaeological and historic importance of the asset will additionally be preserved and the integrity of its setting maintained. Therefore, the magnitude of change is considered to be Low adverse. On an asset of High sensitivity, this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

### ***Dunan Buidhe (S1)***

12.6.17 The Scheduled Monument of Dunan Buidhe survives as well-preserved earthworks of a prehistoric domestic and defensive dun on the eastern coast of the Isle of Gigha. It is of archaeological significance as archaeological investigation could provide further information on the construction and design of forts during the prehistoric period. It is also of historical significance as it adds to the historic narrative of the development of the area. The setting of the dun comprises semi-improved agricultural land, with the asset located on a rocky outcrop providing it with views along the eastern coastline of Gigha, as well as back to the mainland. As a result, it has some views east towards the Proposed Development, although these are partially blocked by rising topography on the west coast of the mainland. It is likely that the dun had views eastwards across the sea towards duns located along the west coastline of the mainland. As a defensive site, these views around the surrounding landscape are important to its setting, which contributes to its significance. It is considered to be of High sensitivity due to its designation as a Scheduled Monument.

12.6.18 Dunan Buidhe is located approximately 9.4km to the north west of the nearest proposed turbine, Turbine 4. The ZTV indicates that 12 turbines will be theoretically visible from the dun, in the same direction of the duns located along the coastline of the mainland which may have been intervisible with the asset. However, as a result of the distance between the asset and the Proposed Development, these views will be limited and should not distract from the wider views eastwards from the asset. It will therefore still be possible to understand its setting, as well as its archaeological and historic interest. Therefore, the magnitude of change is considered to be Negligible. On an asset of High sensitivity this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

### ***Dun Sheallaidh (S2)***

12.6.19 The Scheduled Monument of Dun Sheallaidh comprises the remains of a prehistoric domestic and defensive structure. Although the dun has been badly damaged by later structures, the remains of the asset give it archaeological significance. The archaeological significance is enhanced as further investigation may provide additional information linked to its use and development. The dun also has historic significance as it contributes to the prehistoric development of the study area. It is located at the top of a steep slope which drops away to the coastline to the west. It has wide ranging views of the wider surround landscape although it appears that the key views are along the coastline to the north and

south, with possible intervisibility with other coastal duns, as well as the southern end of the Isle of Gigha. As a defensive structure, its setting contributes to its significance, although it is primarily of significance for its archaeological and historic interest.

- 12.6.20 The dun is located approximately 7.8km to the southwest of the nearest proposed turbine, Turbine 14. The ZTV indicates that 12 turbines will theoretically be visible. However, these views are likely to be limited as a result of intervening rising topography and forestry. The dun's setting can still be appreciated, and its archaeological and artistic importance can still be understood. Therefore, the magnitude of change is considered to be Negligible. On an asset of High sensitivity this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be **'Not Significant'**.

### ***Dun Ach'na h-Atha (S3)***

- 12.6.21 The Scheduled Monument of Dun Ach'na h-Atha survives as well-preserved earthworks of a prehistoric domestic and defensive dun. It is of archaeological significance as archaeological investigation could provide further information linked to its development and use. It is also of historic significance as a result of its role in the development of land use, activity and settlement in the area. The setting of the dun comprises the agricultural land which surrounds it. It is located in an elevated position which commands views around the surrounding landscape in all directions apart from to the north west, which is blocked by rising land. It appears that the key views from the monument are out to sea to the west, and along the coastline to the north and south. Therefore, its setting, as a defensive site on the coastline contributes to its significance, although it is primarily of significance for its archaeological and historic importance. It is considered to be of High sensitivity due to its designation as a Scheduled Monument.
- 12.6.22 The asset is located approximately 4.4km to the southwest of Turbine 14. The ZTV indicates that 11 turbines will be theoretically visible from the dun. However, rising topography and intervening forestry in the direction of the Proposed Development from the asset would limit these views. Whilst there will be a visual intrusion on the setting of the asset to the north east, the views in all other directions will remain unaffected, and its positioning on the coast suggests that the most important views from, and to, the Dun were from the sea and the coastline. The asset will also be preserved and it will still be possible to understand its archaeological and historic importance. Therefore, the magnitude of change is considered to be Low adverse. On an asset of High sensitivity this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be **'Not Significant'**.

### ***Ardlamey cairn (S4)***

- 12.6.23 The remains of the Scheduled Monument of Ardlamey cairn is located above the coastline on the western side of the Isle of Gigha. The cairn has been severely robbed of its stone, presumably for use in the construction of a nearby field dyke, although four stones still remain. It has archaeological significance as part of a wider prehistoric landscape, which includes duns and examples of rock art. The archaeological significance is further increased as archaeological investigation may provide further information relating to the dating of the Development Site. The setting of the asset comprises open coastal land and has good views across the surrounding landscape and sea towards Islay and Jura. The cairn is likely to have been part of a wider ritual landscape and intervisibility between other prehistoric monuments located on Gigha Island is likely to have been important. Therefore, its setting also

contributes to its significance, although it is primarily of significance because of its archaeological importance. The cairn is considered to be of High sensitivity due to its designation as a Scheduled Monument.

- 12.6.24 Ardlamey cairn is located approximately 10km to the north west of the nearest turbine, which is Turbine 4. Although the ZTV indicates that 12 turbines will be theoretically visible from the cairn, these views would be very limited due to distance. There will be a very minor intrusion about the setting of the asset but it will still be possible to understand the asset and its archaeological importance. Therefore, the magnitude of change is considered to be Negligible. The significance of effect is considered to be **Minor adverse**. This is because the views of the Proposed Development will be limited and it will still be possible to understand the cairn's archaeological importance, as well as its setting. In EIA terms this is considered to be '**Not Significant**'.

***Carragh Muasdale, standing stone north of South Muasdale (S6) (see Cultural Heritage Viewpoint D (EIAR Volume 2d))***

- 12.6.25 The Scheduled Monument of a standing stone known as 'Carragh Muasdale' survives in good condition. It is a prominent standing stone which has been incorporated into a stone wall. It is of archaeological significance as archaeological investigations may provide information relating to the dating of the stone. It is also of historical significance due to its relationship to the development of the wider prehistoric landscape. It is located on a ridge within arable ground with good views across the surrounding landscape, although views to the east and south east are limited due to rising topography and forestry. There are good views across the coast to the west, as well as along the coastline to the north. It appears to have been part of a wider prehistoric landscape and is best understood within this. Therefore, setting is considered to contribute to its significance. It is considered to be of High sensitivity due to its designation as a Scheduled Monument.
- 12.6.26 Carragh Muasdale standing stone is located approximately 3.75km to the south west of the nearest proposed turbine, Turbine 14. The ZTV indicates that 11 turbines will be theoretically visible, although these views will be limited as a result of rising topography as well as intervening forestry blocking views towards the Proposed Development. This is demonstrated by Cultural Heritage Viewpoint D (EIAR Volume 2d). While there will be visual intrusion upon the setting of the asset, this will be minimal. The stone will still be preserved and it will still be possible to understand its archaeological and historic importance, as well as its setting within the wider prehistoric landscape. Therefore, the magnitude of change to the significance of the asset is considered to be Negligible. On an asset of High sensitivity this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

***Dun Chibhich (S9)***

- 12.6.27 The Scheduled Monument of Dun Chibhich, the remains of a prehistoric dun, survives in good condition near the northern end of the Isle of Gigha. It is of archaeological significance as further archaeological work could increase our knowledge of the asset. The archaeological significance is increased as the good preservation of the assets suggests that it is likely that buried remains, including buildings and occupation debris, would survive. The dun is also of historic significance for the information it provides

about the development of the prehistoric landscape. The setting of the dun comprises an area of rough grazing land which takes advantage of a natural defensible location, with steep drops to the west and east on one of the highest points on Gigha. This high location gives the asset good views across the surrounding landscape, especially across the coast to the east and west, as well as making it visible from the sea. It is also likely that the dun has intervisibility with other duns on Gigha, as well as other coastal duns on the mainland. Its setting as a defensive site in a naturally defensible site which commands good views over the surrounding landscape contributes to its significance, although this primarily derives from its archaeological and historic importance. The dun is considered to be of High sensitivity due to its designation as a Scheduled Monument.

- 12.6.28 Dun Chibich is located approximately 10.2km to the north west of Turbine 4. The ZTV indicates that 12 turbines will theoretically be visible. These views will be limited as a result of the distance between the asset and the Proposed Development. The addition of turbines to the east on the mainland will not become a dominant feature and will not detract from views of the dun from the sea to the west. Although there will be a minor intrusion on the setting of the asset, it will still be possible to understand it as well as the archaeological and historic importance of the dun. Therefore, the magnitude of change is considered to be Negligible. On an asset of High sensitivity, this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be **'Not Significant'**.

***Achamore Estate, including Achamore House and gate lodge (with gate-piers and garden walls) (S10, S14 & S15) (see Cultural Heritage Viewpoint E (EIAR Volume 2d))***

- 12.6.29 Achamore House, located on the Isle of Gigha, (S10) is a Category B listed Baronial mansion and the grounds and gardens are listed on the Inventory of Gardens and Designed Landscapes (S15). Achamore House (S10) is of architectural significance resulting from its 19<sup>th</sup> century and early 20<sup>th</sup> century design and architectural details. It was built in the Scottish Baronial style in a long rambling block two storeys high with harled gabled slate roofs. The building has ashlar chimneys, semi-circular towers and conical roofs. The house was designed by the firm of architects at which Charles Rennie Mackintosh was a trainee, and there are elements of the house which have been attributed to him. The house is located in a secluded and intimate setting which is surrounded by the designed landscape which adds to its significance. The landscape is designed with a central clearing in which the house is situated. The Category B listed gate lodge's (S14) 19<sup>th</sup> century design and architectural details, including a harled construction with a conical slate roof and semi-circular porch, provides decorative interest and adds to the architectural significance of the principal house. It is a key element in the experience and approach to the Achamore Estate and designed landscape. The gate lodge is located at the southern entrance to the grounds of Achamore House in a relatively open landscape. Its function as a gate lodge means that it is dependent on its association and functional relationship with the house and grounds for its setting and significance. It is designed to be seen in association with the house and grounds and as a key and notable entrance on approach to the house designed to welcome guests, heighten the sense of arrival and to give an indication of the wealth and status of the owners of the Estate.
- 12.6.30 Achamore House designed landscape (S15) comprises a late 19<sup>th</sup> century designed landscape which features a 20<sup>th</sup> century garden and plant collection and provides the setting for the Category B listed Achamore House (S10). The existing woodland structure was created in the 19<sup>th</sup> century and shelters

20<sup>th</sup> century specimen planting developed and designed by Sir James Horlick. Achamore House landscape has artistic and architectural significance resulting from Horlick's design of the planting which was set out in a series of distinct, named, groups, such as the Pond Garden and the Hospital Garden. The gardens also have cultural significance as a tourist attraction which is open to the public. The grounds were not designed to have long reaching views of the surrounding area as it appears that the experience of the landscape was about the cumulative impact of the individual plants and the individual themed areas that combined to create the garden as a self-sufficient experience purposefully excluding external influences to concentrate on the designed landscape. Long reaching views are limited and only gained from the highest point of the grounds, and as a result appear to be incidental and secondary to the main purpose of the garden. The setting of the grounds contributes to their significance but this is predominantly for climatic reasons, in that they are designed to make best use of the climatic conditions of the island, rather than to take advantage of any scenic views or intervisibility with other features beyond the island. The collection of features which form the Achamore House estate are also of historic significance. Achamore House, the gate-lodge and the grounds and gardens are considered to be of High sensitivity due to their designations.

- 12.6.31 The Category B listed Achamore House (S10) is located approximately 8.9km to the north west of Turbine 4, on the Isle of Gigha. Although the ZTV indicates that there will be 12 turbines theoretically visible, the house is surrounded by its designed landscape with no views of the Proposed Development, as shown in Cultural Heritage Viewpoint E (EIAR Volume 2d). As the landscape is protected as a designed landscape it is considered that the experience of the designed landscape will not change and that woodland which purposefully encloses the house will be retained. Therefore, there will be no change to the significance or the setting of the asset. On an asset of High sensitivity this equates to a **Negligible** significance of effect. In EIA terms this is considered to be '**Not Significant**'.
- 12.6.32 The Category B listed gate lodge (S14) is located approximately 8.6km to the north west of Turbine 4. The ZTV indicates that 12 turbines will theoretically be visible from the asset. However, the visual dominance of these will be reduced as a result of the distance between the asset and Proposed Development. In addition, the Proposed Development would not affect the ability to understand the gate lodge's association with Achamore House and the designed landscape as the gate lodge was designed to be seen and not designed to have a view as such, other than to and from key approaches to the principal house. Therefore, the magnitude of change is considered to be Negligible. Although this equates to a minor adverse significance of effect on the matrix, the significance of effect is considered to be **Negligible**. It will still be possible to understand the gate lodge's architectural and historic significance as well as the key functional relationship with Achamore House.
- 12.6.33 The Achamore House designed landscape (S15) is located approximately 8km to the north west of Turbine 4. The ZTV indicates that 12 turbines will theoretically be visible from the asset. However, there does not appear to be any designed views from the grounds eastwards towards the mainland. Whilst there could be opportunities for glimpses of the Proposed Development through and beyond the trees, these will not affect the significance or the setting of the designed landscape and will be incidental to the significance. The turbines would be less visually prominent due to distance. They will effectively be absorbed into the general view of the mainland and would not have an adverse impact on the way the landscape is understood or enjoyed. Therefore, the magnitude of change is considered to be Negligible.

Although this equates to a minor adverse significance of effect using the matrix, the significance of effect is considered to be **Negligible**. This is a result of the distance between the asset and the Proposed Development and any glimpses of it will only have an imperceptible effect. In EIA terms this is considered to be **'Not Significant'**.

### ***Achamore House, old parish church (S7)***

12.6.34 The old parish church is a Scheduled Monument and survives as well-preserved upstanding ruins with the north and east walls remaining as their original heights near Ardmore House on the Isle of Gigha. The church is a simple rectangular structure built with rubble with dark red and coarse-grained yellow sandstone window dressings. These surviving architectural details give the asset architectural significance and give an indication of the ornamentation and the status of the church. It is of archaeological significance as it has the ability to reveal important information about the historic construction techniques and liturgical changes, as well as other elements of its use. The archaeological significance is furthered as a result of the survival of 14<sup>th</sup> and 15<sup>th</sup> century tombs. Finally, the church is also of historical and communal significance for the information it provides about the development of religious practice and the role it played in the surrounding community. The setting of the church, whilst now located within agricultural land, is associated historically with the designed landscape of Achamore House immediately to the south. Although the church was not designed with the purpose of having long ranging view of the landscape it does sit on an area of raised ground and it would have been a prominent feature within this landscape, although views from it would have been less important to the community which it served. For this reason, the setting of the church adds to its architectural, archaeological, historic and communal interest. It is considered to be of High sensitivity due to its designation as a Scheduled Monument.

12.6.35 The old parish church is located approximately 9km to the north west of Turbine 4. The ZTV indicates that 12 turbines will be theoretically visible from it. However, the visual prominence of the turbine will be largely reduced due to distance. The turbines appear as distant elements in a large visual corridor. The turbines will be readily absorbed and incorporated into the general view rather than dominating or overpowering the setting. The forestry of Achamore House will also provide screening. It will still be possible to understand its architectural, archaeological, historic and communal interest. Therefore, the magnitude of change is considered to be Negligible. On an asset of High sensitivity, this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be **'Not Significant'**.

### ***Cara Chapel and Cara House (S11)***

12.6.36 Cara Chapel is a Category B listed building, which survives as a roofless oblong chamber located on the small island of Cara off the south tip of Gigha. Despite its partly dilapidated state, some architectural details remain such as the pointed doorway and flat headed window on its northern side. These details give the chapel an indication of its previous form and add to its architectural significance. It was built as an attachment to Cara House, a Category C listed Building, and was converted into a kitchen in the 18<sup>th</sup> century. For this reason, it is of historical significance as it shows the development of Cara House.

12.6.37 Cara House, originally the Cara Tacksman's House, dates from c.1730 and is a traditional double fronted house of two storeys and attic constructed of rubble. There are accounts that the Island was the centre

of smuggling between the islands of Gigha, Jura and Islay and therefore the house was positioned to allow good views of the seaward approach and the mainland. Its significance lies in its vernacular form and historic connections to the former use and ownership of the island. Its setting contributes towards this. Both Cara Chapel and Cara House are located on the remote location of Cara Island which is only accessible by boat. There are no roads or development on the island which gives the asset an isolated and solitary setting.

- 12.6.38 There are good views from the chapel and Cara House eastwards towards the mainland and the Category A A'Chleit Church (S40) can be seen. Although there is no historic relationship between the two buildings, they are visible from one another and there is an implied relationship as both are prominent within the landscape due to the sense of isolation they evoke. The outline of Cara House to which the Chapel is attached is easily discernible from the southern end of Gigha and from the mainland and emphasises the solitary nature of the buildings and the tacksman that once lived there. The chapel's significance lies in its architectural and historic interest, and its setting contributes towards this. It is considered to be of High sensitivity due to its designation as a Category B listed building. The house's significance lies in its historic interest and the setting contributes towards this. It is considered to be of Medium sensitivity due to its designation as a Category C listed building.
- 12.6.39 Cara Chapel and Cara House are located approximately 7.23km to the north west of Turbine 10. Whilst the ZTV indicates that there will be 12 turbines theoretically visible, the views are likely to be limited to blades and hubs of the turbines rising above the mainland. However, the inclusion of the Proposed Development within the view would not detract from the view across to A'Chleit Church or the open view of the sea approach and the mainland. In addition to this, the Proposed Development would not detract from the sense of isolation which is provided by the chapel and the house's setting on the remote island of Cara. When viewing the chapel from the mainland, the Proposed Development would not be visible within that view. For the Chapel the magnitude of change is considered to be Negligible. On an asset of High sensitivity, this equates to a **Minor adverse** significance of effect. For Cara House the magnitude of change is considered to be Negligible. On an asset of Medium sensitivity, the significance of effect is considered to be **Negligible**. In EIA terms this is considered to be '**Not Significant**'.

### ***Gigha and Cara Parish Church (S13)***

- 12.6.40 Gigha and Cara Parish Church is a Category B listed building located on the eastern side of the Isle of Gigha near the ferry landing and the main settlement on the island. It is a rubble construction with a gabled slate roof and round headed windows. This gives the building architectural significance. The church is also of historical significance, resulting from it being the fourth church to be built on the same site, replacing earlier structures. The octagonal font in the church is the oldest within Argyll, having come from another church in 1938. This adds further historic significance. Finally, the church is of archaeological significance, as further archaeological investigation may provide more information about the earlier structures which stood on site. The church is located on a high point in the centre of Gigha, set back from the roadside up a meandering path through planting. The church is a dominant feature in the local surrounding landscape and would have been designed to be widely visible within the parish it served. Its setting, therefore, contributes to its significance. However, the church is primarily of

significance for its architectural, historic and archaeological importance. It is considered to be of High sensitivity due to its designation as a Category B listed building.

- 12.6.41 The Gigha and Cara Parish Church (S13) is located approximately 9.2km to the north west of Turbine 4. The ZTV indicates that 12 turbines will theoretically be visible from the asset. However, the view from the church is panoramic and the distance to the turbines decreases the visual prominence allowing the turbines to be absorbed into the wider landscape rather than being a dominant or a distracting element within its setting. Therefore, the magnitude of change is considered to be Negligible on the heritage value of this asset. On an asset of High sensitivity, this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

### ***Cup and Ring Marked Boulders and Rocks***

- 12.6.42 Within the wider study area there are a large number of cup and ring marked boulders, stones and rocks. These assets are difficult to date but are believed to date from the late Neolithic to early Bronze Age. Similarly, their purpose is uncertain. There are various theories, including the idea that they overlooked the more fertile soils (Bradley 1997), or that they formed landscape markers (Parker Pearson 1999, 91). Bradley (1997) states that the rock art of Mid Argyll is located on the limits of unusually productive land, which indicates that they may form landscape markers in this region at least. The stones range from simple cups to more complex patterns of multiple cups, rings and grooves.
- 12.6.43 As well as the assets assessed below, there a number of additional assets within the wider study area which will have no intervisibility with the Proposed Development, or which will not be seen in the same view as the wind turbines. While these assets are not considered to be affected by the Proposed Development, they demonstrate the use of the landscape within this period and the number of assets contributes to the heritage significance of the area.
- 12.6.44 Although the exact purpose of the stones is unknown, they are generally considered to be of archaeological and artistic significance. The heritage significance of individual assets is discussed below. Most examples cannot be seen from any distance, and it is unclear how the setting of the assets, individually and as a group, contributes to their significance. Some stones would have originally been located within open, high locations, but even then they might not have been visible from long distances. Similarly, views from the stones may also have been of some importance, but again the extent of this is uncertain. Bradley (1997) suggests that views from the cup marked stones may have had some input into their location, but this again is far from clear. In addition, many of the cup and ring marked stones are now located within forestry. Many of the stones are relatively small in size, which would have reduced their visibility within the landscape, although some (e.g. 156) are larger.
- 12.6.45 The following sections provide assessment of effects on scheduled examples, those non-designated and of schedulable quality, and other non-designated stones.

### ***Low Clachaig cup marked boulders (1) (see Cultural Heritage Viewpoint B (EIAR Volume 2d))***

- 12.6.46 The Scheduled Monument is a boulder with approximately 80 cup marks and 12 cup and ring marks. They date to the prehistoric period but cup marked stones are difficult to date with any certainty. While there are a number of theories about what the carvings symbolise and their function, they are of archaeological significance due to their survival and age. The archaeological significance is furthered as archaeological investigations may reveal further markings or associated evidence, such as artefacts, which may aid in increasing our understanding about the date and use of these carvings. Although the intent and meaning of the carvings is not known, they are of artistic significance as their placement upon the boulder was deliberate. The setting of the asset comprises an area of thick woodland. There are no views to or from the asset due to this thick woodland. Its setting in this private location may add to its significance. It is unclear how the setting of the cup and ring marked stones contribute to their significance, although its wider landscape setting does not really contribute to its significance, as the asset is not visible from a larger distance. The cup marked boulders are primarily of significance for their archaeological and artistic significance. The asset is considered to be of High sensitivity due to its designation as a Scheduled Monument.
- 12.6.47 The Scheduled cup markings are located approximately 1.1km to the south west of the nearest proposed turbine, Turbine 14. The ZTV indicates that 12 turbines will theoretically be visible from the asset. However, their location in thick forestry means that they are not easily accessible and the Proposed Development would not be visible. Without this tree cover, the Proposed Development would be visible and the turbines will distract from the views of the surrounding landscape from the asset. However, it is not known for certain how the setting of the cup markings contributes to their significance. They are primarily of significance for their archaeological and artistic importance, and it will still be possible to understand this. Therefore, the magnitude of change is considered to be Low adverse. On an asset of High sensitivity this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be **'Not Significant'**.

### ***Rock Art Panels (163) (see Cultural Heritage Viewpoint C (EIAR Volume 2d))***

- 12.6.48 The Scheduled Monument comprises a cup marked monolith and cup marked rocky outcrops which were probably carved in the early prehistoric period. There are approximately 80 cup marks over the three surfaces. Excavations at other cup marked rock sites in the Argyll area have uncovered artefacts as well as environmental remains. Any buried surviving remains associated with these markings may help the understanding of the nature and use of these assets. This gives them archaeological significance. Their design, including single cup markings, kidney shaped markings and crescent shaped markings, give them artistic significance. The cup marked surfaces are located close to the Allt Achapatrick burn. The monolith predominately faces east across the surrounding agricultural land and forestry towards the Kintyre ridge. The rocky outcrops face west, also overlooking the surrounding agricultural land but also with wider views across the sea towards the Sound of Gigha. Views towards the asset are limited due to their discrete location and they are not visible from a large distance. However, their location close to the natural resource of the burn suggests a deliberate setting. This adds to their significance, although they are primarily of significance for their archaeological and artistic

importance. The asset is considered to be of High sensitivity due to its designation as a Scheduled Monument.

- 12.6.49 The cup marked panels are located approximately 1.6km to the north west of the nearest proposed turbine, Turbine 10. The ZTV indicates that ten turbines will be theoretically visible although intervening forestry means that it is likely that only the blades of the turbines will be visible, rather than the whole of the structures. As can be seen on Cultural Heritage Viewpoint C (EIAR Volume 2d), there will be no views of the turbines from the asset, although there may be an intrusion on the landscape setting of the asset, although this intrusion will only be in views looking to the east of the asset. Although the Proposed Development will detract from the views of the surrounding landscape, it is not known for certain how the setting of the panels contributes to their significance. They are primarily of significance for their archaeological and artistic importance, and it will still be possible to understand this significance with the turbines in place. Therefore, the magnitude of change is considered to be Negligible. On an asset of High significance this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

***Non-Designated Assets of Schedulable Quality (4, 6, 8, 9, 66, 67, 114, 119-122, 127, 142-144, 154-156, 177, S20, S21, S23, S28 & S30-S37)***

- 12.6.50 There are several cup and ring marked boulders located throughout both the Inner Study Area, as well as the Wider Study Area. Although their function is not known, they are of archaeological significance due to age and survival. Further archaeological evaluation may reveal features associated with the boulders and rocks which could provide more information about their dating and use. The deliberate placing of the markings across the rocks gives the assets artistic significance. This artistic significance is furthered on some rocks as they feature more decorative designs (124, 154 & 155).
- 12.6.51 The setting of the assets largely comprise fairly remote locations, some within thick forestry with limited views of the surrounding landscape, although some are located on the open uplands allowing views of the wider area (177). Furthermore, it is possible that some of the rock art within the plantations may have been lost during forestry operations, and some assets were not identified during the walkover survey (6 and 14). One cup marked stone (S121) is located in the foundation of one of the buildings at Low Clachaig Farm. These locations suggest that the rocks are no longer in their original location. Although the rocks and boulders often command wider landscape views, they themselves are not visible from a wider distance. It is likely that they were placed intentionally, perhaps to mark land ownership and to mark a route, meaning that their setting contributes to their significance. However, they are primarily of significance for their archaeological and artistic importance. They are considered to be of High sensitivity as assets which are considered to be of schedulable quality.
- 12.6.52 The assets listed in Table 12-7 are located within thick forestry which is not easily accessible. As a result of the tree cover, the Proposed Development would not be visible. Without tree cover, the ZTV indicates that the Proposed Development would be visible, which would detract from wider landscape views from the assets. However, it is unclear how the setting of these assets contributes to their significance. They are primarily of significance for their archaeological and artistic interest, and it will still be possible to understand the assets with the Proposed Development in place. Therefore, the magnitude of change is

considered to be Low adverse. On assets of High sensitivity this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

**Table 12-7 Cup and Ring Marked Stones with Minor Adverse Magnitude of Change (Assets 9, 66, 67, 114, 120 and 144)**

Asset	Closest Turbine	Number of Turbines Theoretically Visible
9	120m to the west of Turbine 8	8
66	1860m to the west of Turbine 7	12
67	189m to the west of Turbine 7	12
114	1.8km to the southwest of Turbine 14	12
120	1.7km to the southwest of Turbine 14	12
144	1.5km to the southwest of Turbine 14	12

12.6.53 There are a number of non-designated assets recorded across the study area (Table 12-8). The ZTV indicates that the Proposed Development will be visible from these assets. Whilst there will be a visual impact on the setting of these assets, and the Proposed Development will detract from wider landscape views from the assets, it is unclear whether, or how, this contributes to their significance. They are primarily of significance for their archaeological and artistic importance and the addition of the turbines will not affect the understanding of this importance. The magnitude of change for the following assets is considered to be Negligible. On assets of High sensitivity this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

**Table 12-8 Cup and Ring Marked Stones with Minor Adverse Magnitude of Change (Assets S20, S32-S37, 119, 122, 127, 142, 154-156, and 177)**

Asset	Closest Turbine	Number of Turbines Theoretically Visible
S20	4.4km to the south of Turbine 14	7
S32 – S34	4.2km to the north of Turbine 1	11
110	2km to the north of Turbine 1	12
S36	4.2km to the north of Turbine 1	12
S37	4km to the north of Turbine 1	12
142	1.6km to the north of Turbine 1	12
119	1.5km to the southwest of Turbine 14	12
122	1.9km to the southwest of Turbine 14	12
127	1.6km to the west of Turbine 10	10
142	1.5km to the southwest of Turbine 1	12

Asset	Closest Turbine	Number of Turbines Theoretically Visible
154	1.4km to the north of Turbine 1	12
155	1.4km to the north of Turbine 1	12
156	1.5km to the north of Turbine 1	12
177	500m south of Turbine 1	12

12.6.54 The assets listed in Table 12-9 are located within thick forestry which is not easily accessible, meaning that views of the Proposed Development would not be visible. As noted above, it is also possible that some of these assets may have been lost as a result of forestry operations. Without the tree cover, the ZTV indicates that turbines will be theoretically visible from the assets. However, these views will be reduced as a result of distance, as well as intervening rising topography and tree cover. In addition, it is disputed how the setting of the assets contributes to their significance. They are primarily of significance for their archaeological and artistic importance and it will still be possible to understand this importance with the Proposed Development in place. Therefore, the magnitude of change is considered to be Negligible. On assets of High sensitivity this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be **'Not Significant'**.

**Table 12-9 Cup and Ring Marked Stones with Minor Adverse Magnitude of Change (Assets 5, S21, S31)**

Asset	Closest Turbine	Number of Turbines Theoretically Visible
5	1.2km m to the west of Turbine 10	12
S21	7.8km to the southwest of Turbine 14	12
S31	2.7km to the north of Turbine 1	10

12.6.55 The following assets listed in Table 12-10 are not considered to be affected by the Proposed Development. This is a result of distance and intervening topography and forestry. It is unclear how the setting of the assets contributes to their significance. They are primarily of significance for their archaeological and artistic importance, and it will still be possible to understand this.

**Table 12-10 Cup and Ring Marked Stones with no change (Assets S23 and 121)**

Asset	Closest Turbine	Number of Turbines Theoretically Visible
S23	11.1km to the southwest of Turbine 14	8
121	1.8km to the southwest of Turbine 14	12

### ***Cup and Ring Marked Boulders and Rocks (5, 12-14, 64, 99, 153, 158, S16, S19, S22, S25, & S39)***

12.6.56 There are several non-designated cup and ring marked boulders recorded across the wider study area. Their function is not known but due to their age and survival, they are considered to be of archaeological

significance. Further archaeological investigation may provide more details about their date and use. The deliberate placing of the cup and ring marks adds artistic significance.

12.6.57 The setting of the boulders and rocks comprise private, remote locations within thick forestry or upland moorland. One boulder (S19) is located on agricultural land adjacent to the coastline. Asset S16 is located to the left of a track which leads to a private dwelling. In the majority of cases, the assets have wider landscape views although they are not visible from long distances. It is likely that the rocks and boulders were deliberately sited, or chosen for engraving, although the purpose of this is not known. Therefore, while their setting contributes to their significance, they are primarily of significance for their archaeological and artistic importance. They are considered to be of Medium sensitivity as assets which contribute to regional research objectives.

12.6.58 The magnitude of change on the assets listed in Table 12-11 is considered to be Low adverse. Although there will be a visual intrusion upon the setting of the asset, it is disputed how the setting contributes to the significance of these assets. They are primarily of significance for their archaeological and artistic importance which will still be preserved and understood. On assets of Medium sensitivity this equates to a **Minor adverse** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

**Table 12-11 Cup and Ring Marked Stones with Minor Adverse Magnitude of Change (Assets 12-14, 64, and 153)**

Asset	Closest Turbine	Number of Turbines Theoretically Visible
12	303m west of Turbine 10	12
13	162m west of Turbine 8	12
14	148m west of Turbine 10	12
64	263m west of Turbine 7	12
153	1km to the north of Turbine 1	12

12.6.59 Asset S39 is located approximately 7.9km to the southwest of Turbine 14 in an area of thick forestry which is not easily accessible. This setting means that there will be no views of the Proposed Development. However, without the tree cover, the ZTV indicates that seven turbines will theoretically be visible from the asset. However, these views will be reduced due to distance as well intervening rising topography and tree cover. Whilst there will be a visual intrusion to the setting of the asset, it is not certain how this setting contributes to its significance. The asset is primarily of archaeological and artistic significance, which will be preserved. Therefore, the magnitude of change is considered to be Negligible. On an asset of Medium sensitivity this equates to a **Negligible** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

12.6.60 There are a further three non-designated cup and ring marked stones recorded across the study area (listed in Table 12-12). The ZTV indicates that the Proposed Development will be visible from these assets. Whilst there will be a visual intrusion on the setting of these assets, it is unclear whether, or how, this contributes to their significance. They are primarily of significance for their archaeological and artistic

importance and the addition of the turbines will not affect the understanding of this importance. The magnitude of change for the following assets is considered to be Negligible. On assets of Medium sensitivity this equates to a **Negligible** significance of effect. In EIA terms this is considered to be '**Not Significant**'.

**Table 12-12 Cup and Ring Marked Stones with Negligible Magnitude of Change (Assets 99, 100, S16, 99 and S25)**

<b>Asset</b>	<b>Closest Turbine</b>	<b>Number of Turbines Theoretically Visible</b>
S16	8.8km to the north west of Turbine 4	12
99	1.7km to the north of Turbine 1	12
S25	8.5km to the west of Turbine 4	12

12.6.61 The assets listed in Table 12-13 are not considered to be affected by the Proposed Development. Although the ZTV indicates that the Proposed Development would intrude upon the setting of the assets, it will still be possible to understand this setting. It is also unclear how, or if, the setting of the cup marked features contribute to their significance. The assets are primarily of significance for their archaeological and artistic importance. The Proposed Development will not change this significance.

**Table 12-13 Cup and Ring Marked Stones with Negligible Magnitude of No Change (Assets S19, S22 and 158)**

<b>Asset</b>	<b>Closest Turbine</b>	<b>Number of Turbines Theoretically Visible</b>
S19	5.8km to the southwest of Turbine 14	12
S22	11.1km to the southwest of Turbine 14	8
158	1.4km to the north of 1	12

12.6.62 Due to the primary significance of the cup and ring marked stones resulting from their archaeological and artistic importance, the significance of the effects on the assets is not considered to be more than minor adverse, with many examples having no more than a Negligible effect. Although the presence of the turbines in the landscape will distract the visitor in the wider landscape views, it will still be possible to understand them and their archaeological and artistic significance. There are many recorded examples within the wider area that will remain unaffected and as a group, these assets can be appreciated.

12.6.63 There are no predicted direct or indirect effects resulting from the operation of the access track based on current information.

### *Decommissioning*

12.6.64 There are no predicted direct or indirect effects resulting from the decommissioning phase based on current information. There may be cranes visible on the skyline to dismantle the turbines, but these will

be temporary. As no part of the crane would be taller than the turbines operational tip height and would be in place for a short time span, these impacts would be no greater than the setting impacts from the operational turbines and can therefore be assessed and mitigated in the same way. The crane boom therefore constitutes a Low adverse temporary magnitude of change on the setting of heritage assets of High sensitivity, which is judged to be a **Minor adverse** ('**Not Significant**') effect. Furthermore, any setting effects resulting from operational phase of Development will be removed as a result of the wind turbines being decommissioned.

## 12.7 Mitigation and Monitoring

### *Construction*

- 12.7.1 The exact positions of the turbines, access tracks and associated infrastructure are subject to a micro-siting allowance of between 50m to 100m (see Chapter 3 of this EIAR: 'Project Description' for further detail). Due to the potential for unknown archaeological deposits to exist within the forested areas of the Development Site and along the length of the access track following the line of the Kintyre Way, a phased programme of archaeological work will be carried out pre-construction to identify unknown archaeological remains.
- 12.7.2 The phased programme of archaeological work will be developed in consultation with the Council's Archaeological Advisor, however should include a watching brief during the deforestation due to be undertaken prior to ground investigation works, and subsequent construction work, to identify any remains including additional cup and ring marked stones. A site walkover should also be conducted of those areas of the Proposed Development not accessible during the walkover survey. A Written Scheme of Investigation outlining the planned work would be submitted to the Council's Archaeological Advisor for agreement prior to clearance or enabling works and construction. Further archaeological work may follow if required.
- 12.7.3 Prior to widening commencing on the access track along the Kintyre Way, the exact location of the quarries (139 & 140) believed to lie within the line of the track should be identified. If it is established that the quarries are extant, photographic recording of the quarries should be undertaken prior to any widening works commencing. If it is established that the quarries were removed during previous phases of track development, no further works will be required.

### *Operation*

- 12.7.4 Due to the nature of the Proposed Development, during its operation there are no mitigation measures that can be introduced to further reduce the impacts on the setting of heritage assets. Use of planted screening may itself impact upon the setting of the cultural heritage features and is therefore not considered as a suitable form of mitigation.
- 12.7.5 Although there are no appropriate mitigation measures for operational effects, the provision of suitable interpretive material about the archaeology of the area, specifically the cup marked stones, crofts, and

the shieling grounds could be considered. This would be constructed in a suitable location and could potentially be linked with the Kintyre Way long distance footpath.

### *Decommissioning*

- 12.7.6 There is no mitigation required for temporary setting effects caused by the decommissioning phase.

## 12.8 Residual Effects

### *Construction*

- 12.8.1 There is the potential that unknown archaeological deposits could be uncovered during construction. An archaeological watching brief has been proposed which should identify any remains and enable their preservation by record or avoidance. If they can be preserved by record through, for example, excavation, the magnitude of change can be reduced to Medium. If they can be avoided through micro-siting, the magnitude of change can be reduced to Negligible. Therefore, the residual significance of effect on previously unrecorded remains is unlikely to be no more than **Minor adverse ('Not Significant')**.
- 12.8.2 Identification of any additional cup and ring marked stones during the watching brief would allow impacts to be avoided, meaning that the magnitude of change could be reduced to Low. Therefore, the significance of the effect could be reduced to **Minor adverse ('Not Significant')**.
- 12.8.3 If mitigation works identify that the historical quarries (139 & 140) on the Kintyre Way are extant, a photographic record of the assets will be made prior to any works to widen the track. Therefore, the residual magnitude of effect would be reduced to Medium. This would result in a significance of effect of **Negligible**.

### *Operation*

- 12.8.4 As there are no appropriate mitigation measures for the effects on the setting of heritage assets during operation, there will be no change to the magnitude of change to these assets. Therefore, the significance of effects will remain the same.
- 12.8.5 The construction of provision of suitable interpretive material about the cup marked stones will be considered. Although this will not reduce the significance of effect upon the cup and ring marked rocks, it will help to offset the effects upon them, by enhancing the information about them to the public.
- 12.8.6 Following the implementation of these mitigation measures, the residual effects are considered to be **Negligible or Minor adverse ('Not Significant')**. Residual effects upon the setting of cultural heritage sites for the operational phase can be seen in Table 12-14.

**Table 12-14 Summary of Residual Effects during Operational Phase**

<b>Receptor</b>	<b>Description of Effect</b>	<b>Effect</b>	<b>Additional Mitigation</b>	<b>Residual Effects</b>	<b>Significance of Effect</b>	<b>Significance</b>
Low Clachaig cup marked boulders (1) Scheduled Monument	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Dunan Muasdale (2), Scheduled Monument	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Dunan Buidhe (S1), Scheduled Monument	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Dun Sheallaidh (S2), Scheduled Monument	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Dun Ach'na h'Atha (S3), Scheduled Monument	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Ardlamey cairn (S4), Scheduled Monument	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Negligible	Not Significant
Carragh Muasdale standing stone (S6), Scheduled Monument	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Achamore House, old parish church (S7),	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance of Effect	Significance
Scheduled Monument						
Dun Chibhich (S9). Scheduled Monument	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Rock art panels (163), Scheduled Monument	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Gate lodge (S14), Category B listed building	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Negligible	Not Significant
Achamore House (S15), entry on the Inventory of Gardens and Designed Landscapes	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Negligible	Not Significant
Cara Chapel Category B listed building	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Cara House Category C listed building (S11)	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Negligible	Not Significant
Gigha and Cara Parish Church (S13)	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant
Cup and ring marked stones	Effect on the setting of the asset during	Effect on setting – during operation	Provision of suitable interpretive	Unchanged	Minor Adverse	Not Significant

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance of Effect	Significance
(4, S28, S30, 114, 120 & 144)	the lifespan of the windfarm.			material but no appropriate mitigation to reduce effects		
Cup and ring marked stones (S20, S32-S37, 119, 122, 125, 127, 142, 143, 154, 155 & 156)	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	Provision of suitable interpretive material but no appropriate mitigation to reduce effects	Unchanged	Minor Adverse	Not Significant
Cup and ring marked stones (S21 & S31)	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	Provision of suitable interpretive material but no appropriate mitigation to reduce effects	Unchanged	Minor Adverse	Not Significant
Cup and ring marked stones (S21 & 153)	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	Provision of suitable interpretive material but no appropriate mitigation to reduce effects	Unchanged	Minor Adverse	Not Significant
Cup marked stone (110)	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	Provision of suitable interpretive material but no appropriate mitigation to reduce effects	Unchanged	Negligible	Not Significant

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance of Effect	Significance
Cup marked stones (99, 110, & S16)	Effect on the setting of the asset during the lifespan of the windfarm.	Effect on setting – during operation	Provision of suitable interpretive material but no appropriate mitigation to reduce effects	Unchanged	Negligible	Not Significant
Quarries (139 & 140)	Permanent physical effect to the asset.	Physical effect – during construction	Photo-graphic recording	Unchanged	Negligible	Not Significant
Previously unrecorded archaeology – prehistoric and later agriculture	Potential permanent physical effect to the asset.	Potential physical effect – during construction	Preservation by record (e.g. excavation) Avoidance	Unchanged	Minor Adverse	Not Significant
Previously unrecorded archaeology – cup and ring marked stones	Potential permanent physical effect to the asset.	Potential physical effect – during construction	Avoidance	Unchanged	Minor Adverse	Not Significant
Listed buildings at Killean (178-182)	Temporary effect to the setting of the asset during construction of the windfarm.	Effect on setting – during construction	No appropriate mitigation	Unchanged	Minor Adverse	Not Significant

### *Decommissioning*

12.8.7 The residual effects of decommissioning are **Minor adverse** ('**Not Significant**'), but these will be temporary.

## 12.9 Cumulative Effects

### *Scope of Assessment*

12.9.1 Cumulative effects are caused by in-combination effects to the fabric or setting of individual heritage assets.

- 12.9.2 Physical effects on heritage assets would be on highly localised features, wholly within the Proposed Development area, upon where there would be no cumulative construction effects from other developments. As a result, any cumulative effects will be on the setting of assets. Impacts on the setting of heritage assets from wind farm developments are temporary operational effects. As a result, these are the only cumulative effects which have been considered.
- 12.9.3 There is the potential for some cumulative effects on heritage assets as a result of the Proposed Development and other wind farms in the vicinity. Proposals beyond a distance of 10km from the Development Site were not included in the assessment. Due to the nature of cultural heritage assets, where the visual aspect of an asset's setting is diminished by distance, it is considered that a distance of greater than 10km is sufficient to ensure that there would be no significant cumulative effects on the same assets. However, as the Proposed Development could affect assets up to 10km away, those assets could also be affected by other wind farm developments a further 10km away. Therefore, wind farm developments within 20km of the Development Site have been considered.
- 12.9.4 Wind farms are the only relevant developments which have been considered as other schemes do not have the same extensive visual impacts. Operational wind farms and those that are under construction are considered to form part of the baseline assessment and are therefore excluded from the cumulative assessment. Wind farms at the scoping or pre-application stage are not considered in the cumulative assessment due to the indicative nature of these schemes and the lack of certainty they will progress to the application stage.
- 12.9.5 The wind farms considered as part of the cumulative assessment within the study area are either under construction, have been granted consent or are at the application stage awaiting determination<sup>1</sup>. They comprise:
- Airigh (Consented),
  - Beinn an Turic Phase III (Consented/Under Construction),
  - Blary Hill (Consented/Under Construction),
  - Eascart (Consented/Under Construction),
  - Narachan (Application),
  - Sheirdrim (Application),
  - High Constellation (Consented), and
  - Tangy IV (Consented).

### *Impact Assessment*

- 12.9.6 The consented Airigh Wind Farm is located approximately 22.1km north east of the Proposed Development and includes 14 turbines. The cultural heritage assessment identified operational impacts on one asset considered as part of the current assessment, this being Dun Skeig (SM2491). While potential impacts on the setting of the asset were initially considered, a review found any potential impacts to be Negligible, as the dun is located over 10km from the Proposed Development. Furthermore,

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<sup>1</sup> As of 1<sup>st</sup> July 2021.

the Airigh found any impacts on setting to be minimal and as a result the cumulative significance of effect is considered to be no more than **Minor Adverse**.

- 12.9.7 The High Constellation Wind Farm is located approximately 8.4km to the north of the Proposed Development and consists of ten turbines. The cultural heritage assessment again identified operational impacts on one asset considered as part of the current assessment, this being Dun Skeig (SM2491). While potential impacts on the setting of the asset were initially considered as part of the Proposed Development, a review found any potential impacts to be negligible as the dun is located over 10km from the Proposed Development. As a result, the cumulative significance of effect is considered to be no more than **Minor Adverse**.
- 12.9.8 The proposed Narachan Wind Farm is located approximately 3.6 km to the north of the Proposed Development and originally consisted of 17 turbines, although this has since been reduced to 11. HES did not raise an objection to the original 17-turbine scheme, although did note that there would be significant effects on monuments including one asset considered in this current assessment, Dun Skeig (SM2491). While potential impacts on the setting of the asset were initially considered as part of the Proposed Development, a review found any potential impacts to be negligible as the dun is located over 10km from the Proposed Development. As a result, the cumulative significance of effect is considered to be no more than **Minor Adverse**.
- 12.9.9 The proposed Sheirdrim Wind Farm consists of 19 turbines located some 15.7 km to the north east of the Proposed Development. Objections were submitted against the scheme including from HES who raised concerns about impacts on the setting of Dun Skeig (SM2491), with the biggest impact being on views of the asset when approached from Dunskeig Bay and Loch Tarbert. HES did, however, note that views from the landward side should not result in a significant impact. Both the positioning of the Proposed Development in relation to the Sheirdrim scheme, and the distance in between the two schemes, should result in a cumulative significance of effect considered to be no more than **Minor Adverse**.

## 12.10 Summary of Assessment

- 12.10.1 This chapter has addressed the potential archaeological and cultural heritage issues associated with the Proposed Development. The assessment has collated data from the WoSAS HER, the RCAHMS database, historic mapping, aerial photographs and other documentary sources. Further data was obtained through an archaeological walkover survey of the Development Site.
- 12.10.2 The assessment of the archaeological and cultural heritage sites within a 1km study area of the main Development Site, and 250m of the access track due to be upgraded, found a total of 201 heritage assets which date from the prehistoric period onwards, with the vast majority linked to pastoral agriculture. This includes six Scheduled Monuments and nine listed buildings. The majority of the Scheduled Monuments date to the prehistoric period (1, 2, 3, 163 & 164), with a single site dating to the medieval period (165). The listed buildings are all focused in Killean (178-186).

- 12.10.3 The potential impact on the setting of assets was also considered over a wider 10km study area. Only assets which fell within the ZTV were assessed, although assets which fell outside of the ZTV were still considered within the assessment to ensure their setting did not include wider landscape views of, to, or from the assets which would have the potential to be affected by the Proposed Development. This resulted in setting assessment visits to 12 Scheduled Monuments, five listed buildings, one entry on the Inventory of Gardens and Designed Landscapes and 50 non-designated assets, where access was possible.
- 12.10.4 Detailed results are specified in the Section 12.6 (Assessment of Effects) and were found to be Negligible to Minor adverse. However, there is the potential for previously unrecorded archaeological remains to be found, which if removed could result in a Moderate adverse effect. Mitigation in the form of a programme of archaeological works in areas of construction has therefore been proposed, as detailed in Section 12.7 (Mitigation and Monitoring).
- 12.10.5 The Proposed Development will also have a Minor adverse effect upon the setting of a number of heritage assets. The provision of suitable interpretive material about the cup marked stones could be considered. This will not reduce the setting effects but will help to offset them.
- 12.10.6 Table 12-14 shows the summary of the assessment of operational effects. None of the potential effects are considered to be significant in terms of the EIA Regulations.

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[sources:http://thesaurus.englishheritage.org.uk/thesaurus.asp?thes\\_no=1&thes\\_name=EH%20M](http://thesaurus.englishheritage.org.uk/thesaurus.asp?thes_no=1&thes_name=EH%20M)  
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**RWE**

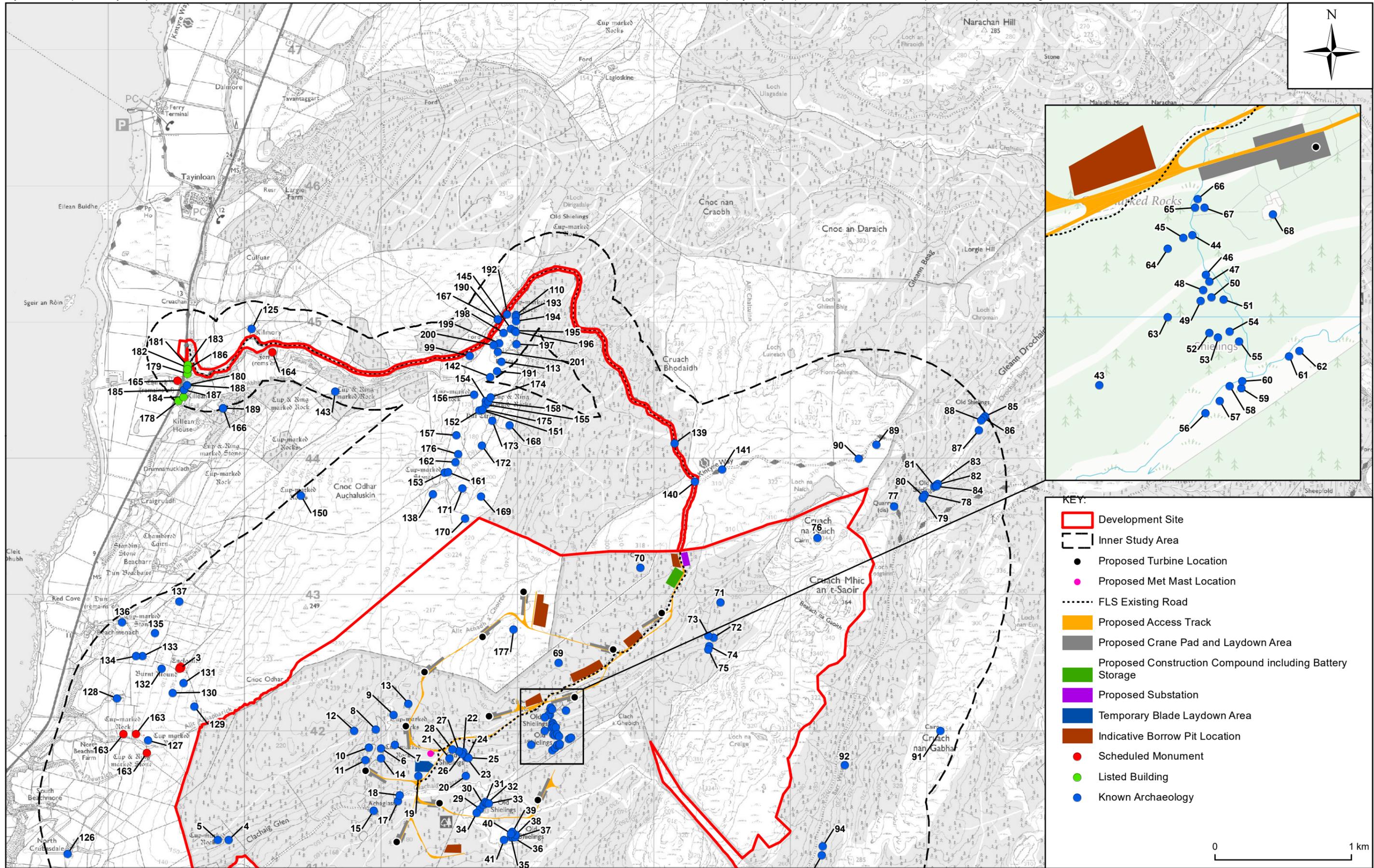
# **Clachaig Glen Wind Farm**

**Environmental Impact Assessment Report**

**Volume 2b**

**EIAR Figures**

**Figures: 12.1; 12.2**



Client: **RWE**

Project: **CLACHAIG GLEN WIND FARM ENVIRONMENTAL IMPACT ASSESSMENT**

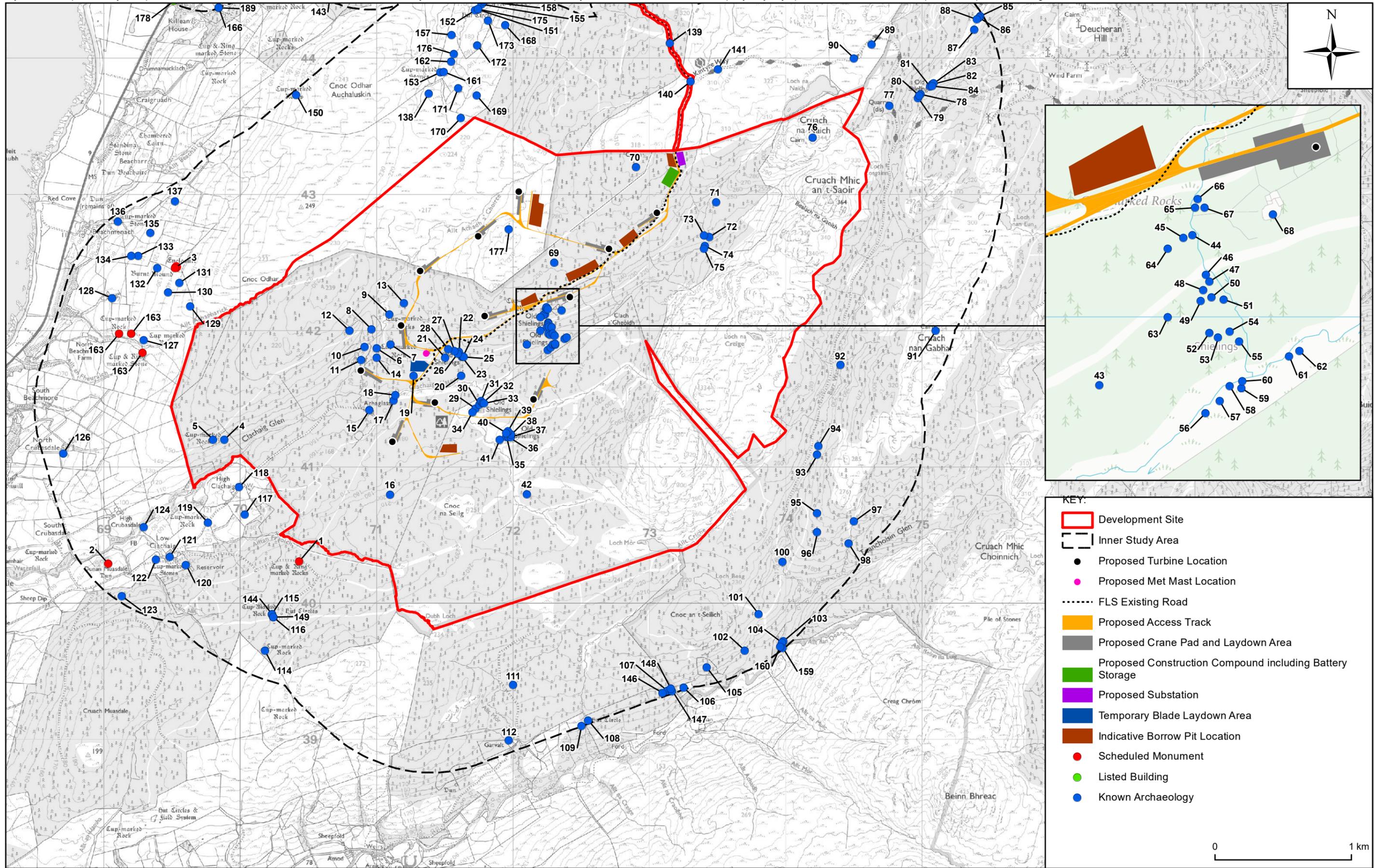
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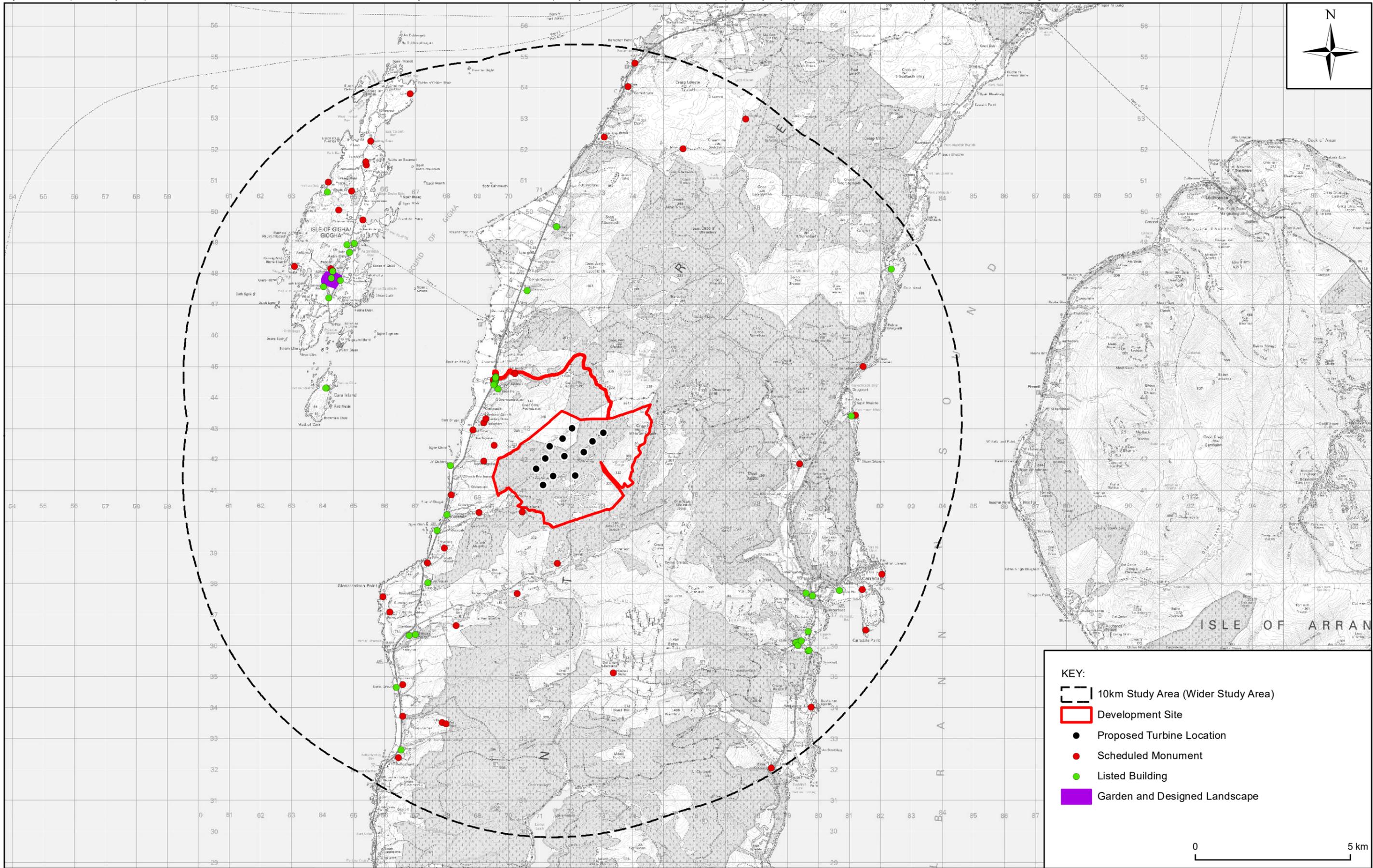
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Title: **FIGURE 12.1 KNOWN ARCHAEOLOGY AND CULTURAL HERITAGE ASSETS SHEET 2 OF 2**

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**KEY:**

- 10km Study Area (Wider Study Area)
- Development Site
- Proposed Turbine Location
- Scheduled Monument
- Listed Building
- Garden and Designed Landscape

0 5 km

Client: **RWE**

Project: **CLACHAIG GLEN WIND FARM ENVIRONMENTAL IMPACT ASSESSMENT**

Title: **FIGURE 12.2 DESIGNATED HERITAGE ASSETS WITHIN 10KM**

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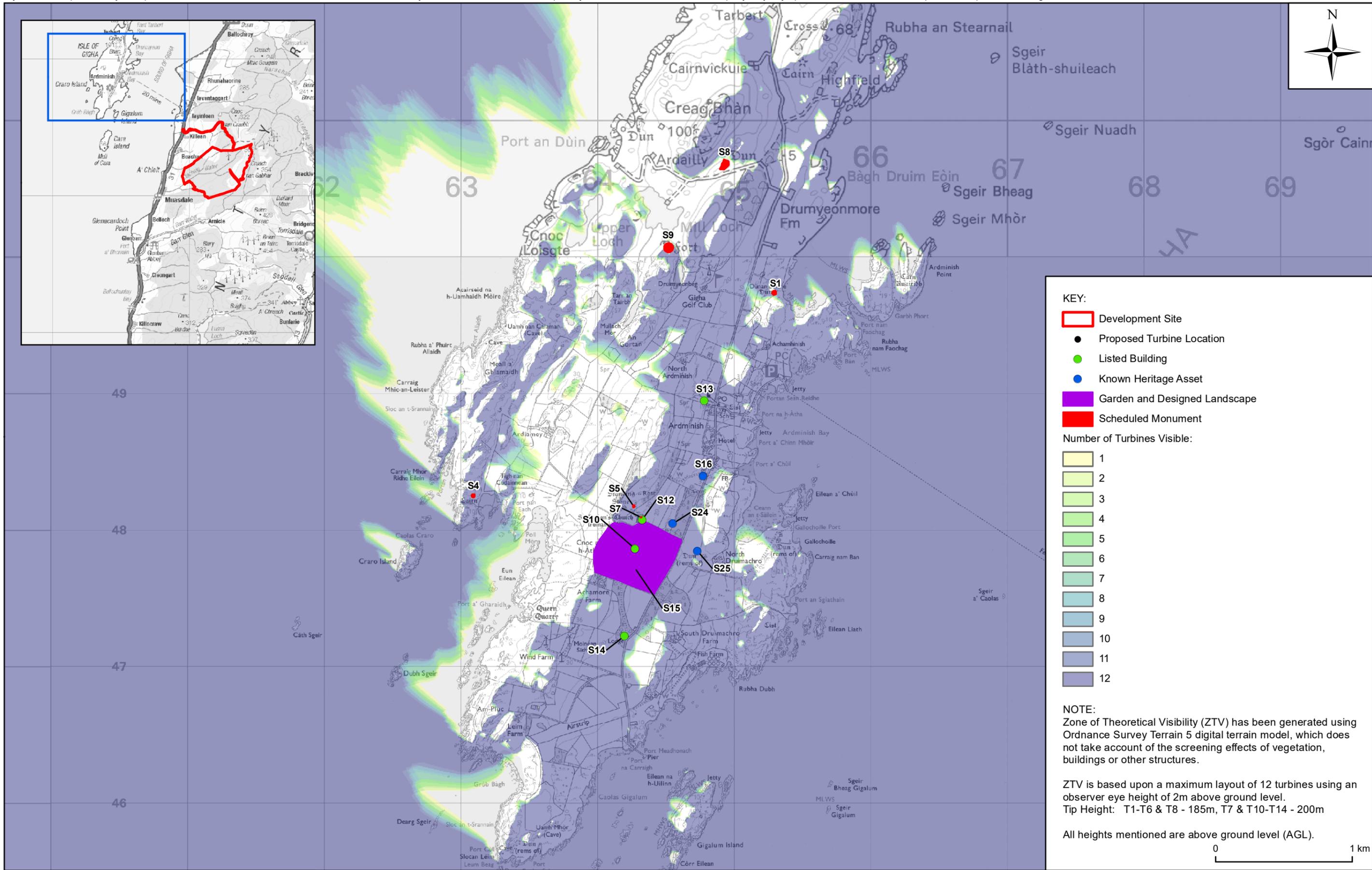
# Clachaig Glen Wind Farm

**Environmental Impact Assessment Report**

**Volume 2b**

**EIAR Figures**

**Figure: 12.3**



**KEY:**

- Development Site
- Proposed Turbine Location
- Listed Building
- Known Heritage Asset
- Garden and Designed Landscape
- Scheduled Monument

**Number of Turbines Visible:**

	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
	12

**NOTE:**  
 Zone of Theoretical Visibility (ZTV) has been generated using Ordnance Survey Terrain 5 digital terrain model, which does not take account of the screening effects of vegetation, buildings or other structures.

ZTV is based upon a maximum layout of 12 turbines using an observer eye height of 2m above ground level.  
 Tip Height: T1-T6 & T8 - 185m, T7 & T10-T14 - 200m

All heights mentioned are above ground level (AGL).

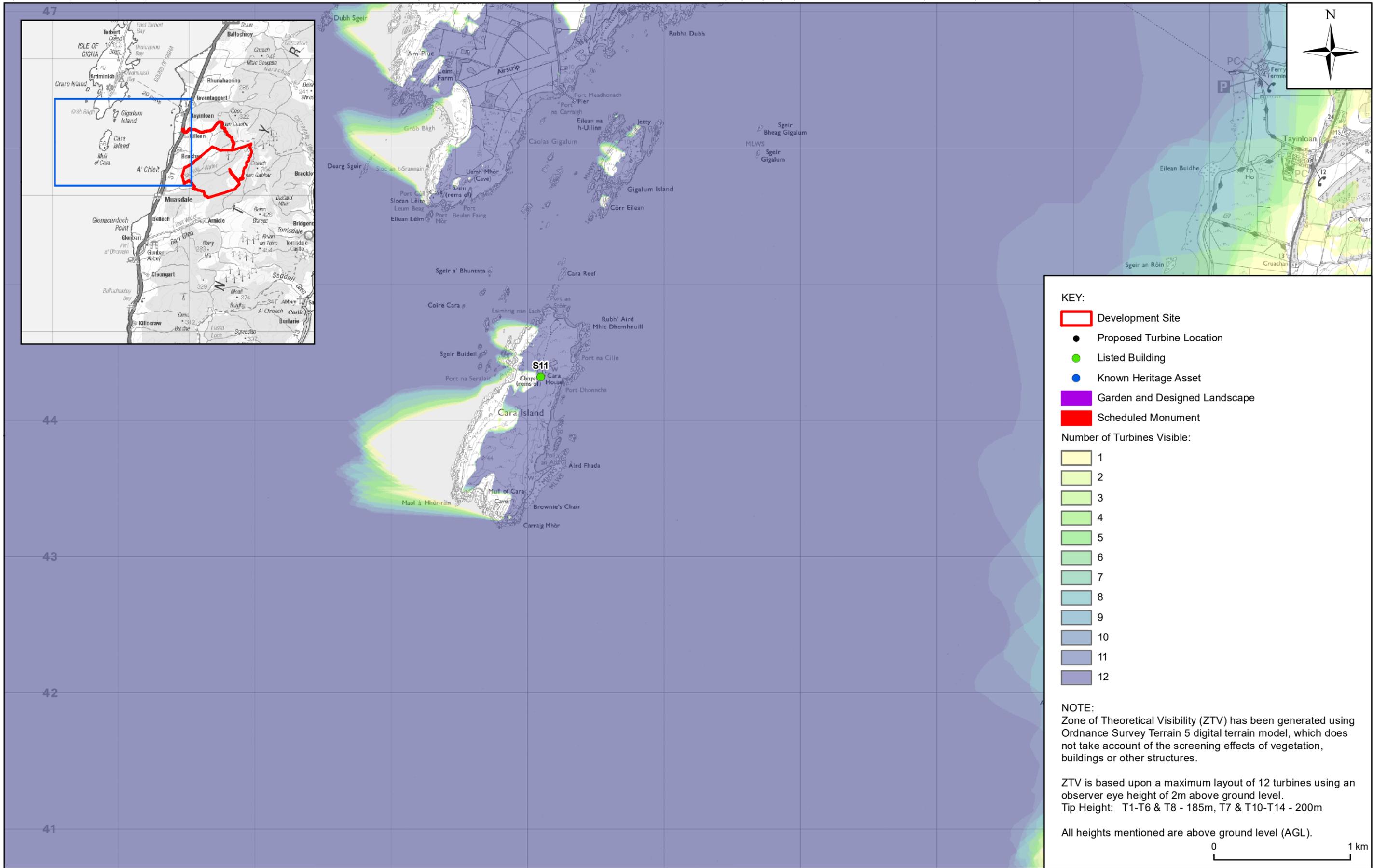
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Client:	<b>RWE</b>
Project:	CLACHAIG GLEN WIND FARM ENVIRONMENTAL IMPACT ASSESSMENT

Title:	FIGURE 12.3 SETTING SITES WITHIN THE ZONE OF THEORETICAL VISIBILITY (ZTV) SHEET 1 OF 5
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**KEY:**

- Development Site
- Proposed Turbine Location
- Listed Building
- Known Heritage Asset
- Garden and Designed Landscape
- Scheduled Monument

**Number of Turbines Visible:**

	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
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All heights mentioned are above ground level (AGL).

0 | 1 km

Client: **RWE**

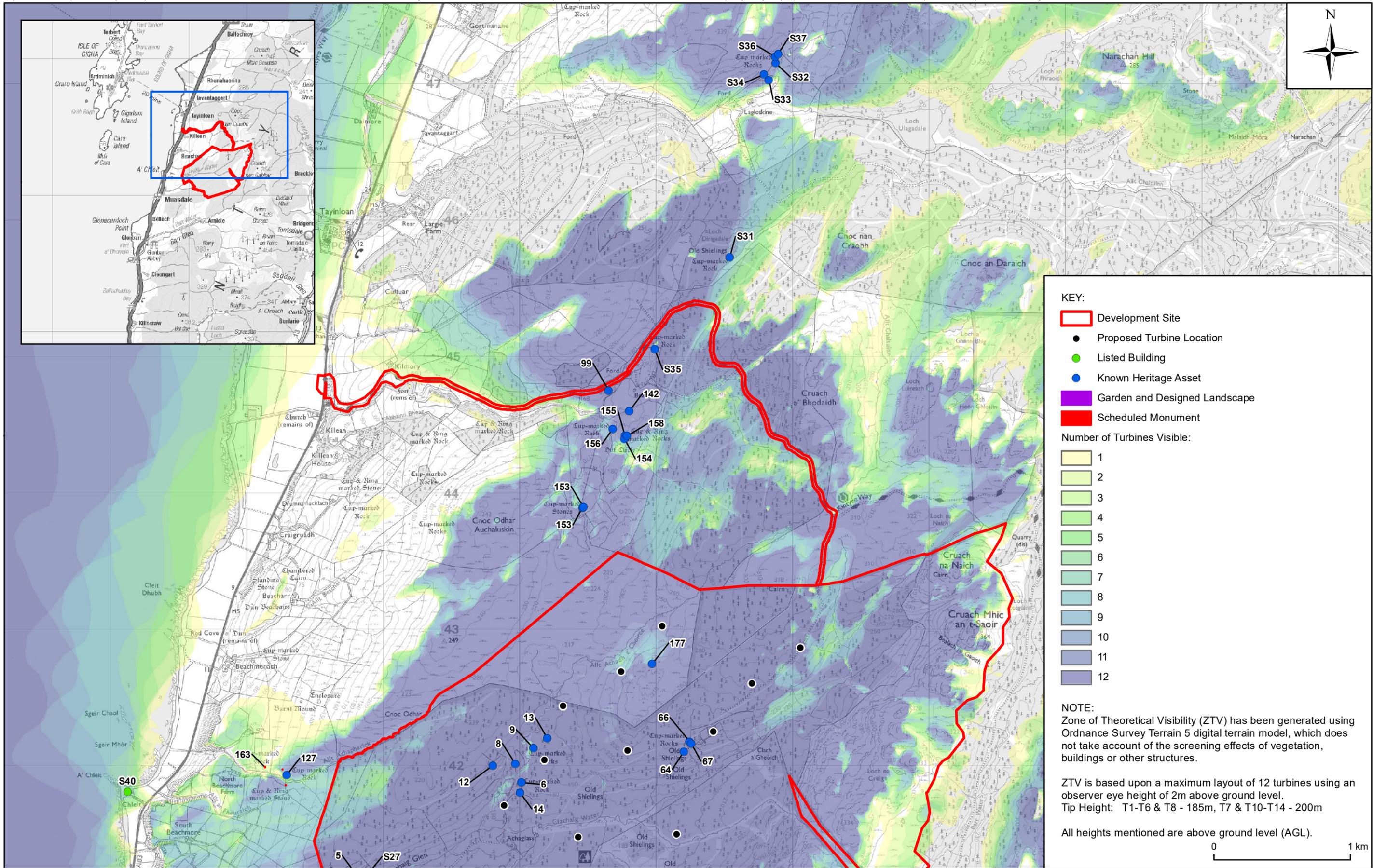
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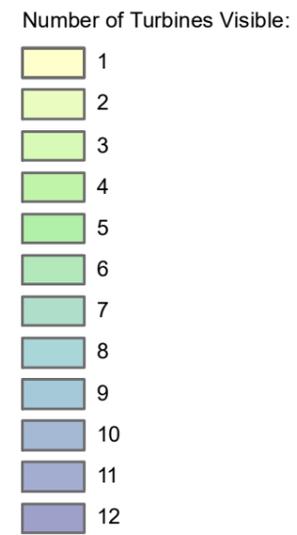
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- KEY:**
- Development Site
  - Proposed Turbine Location
  - Listed Building
  - Known Heritage Asset
  - Garden and Designed Landscape
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 Tip Height: T1-T6 & T8 - 185m, T7 & T10-T14 - 200m

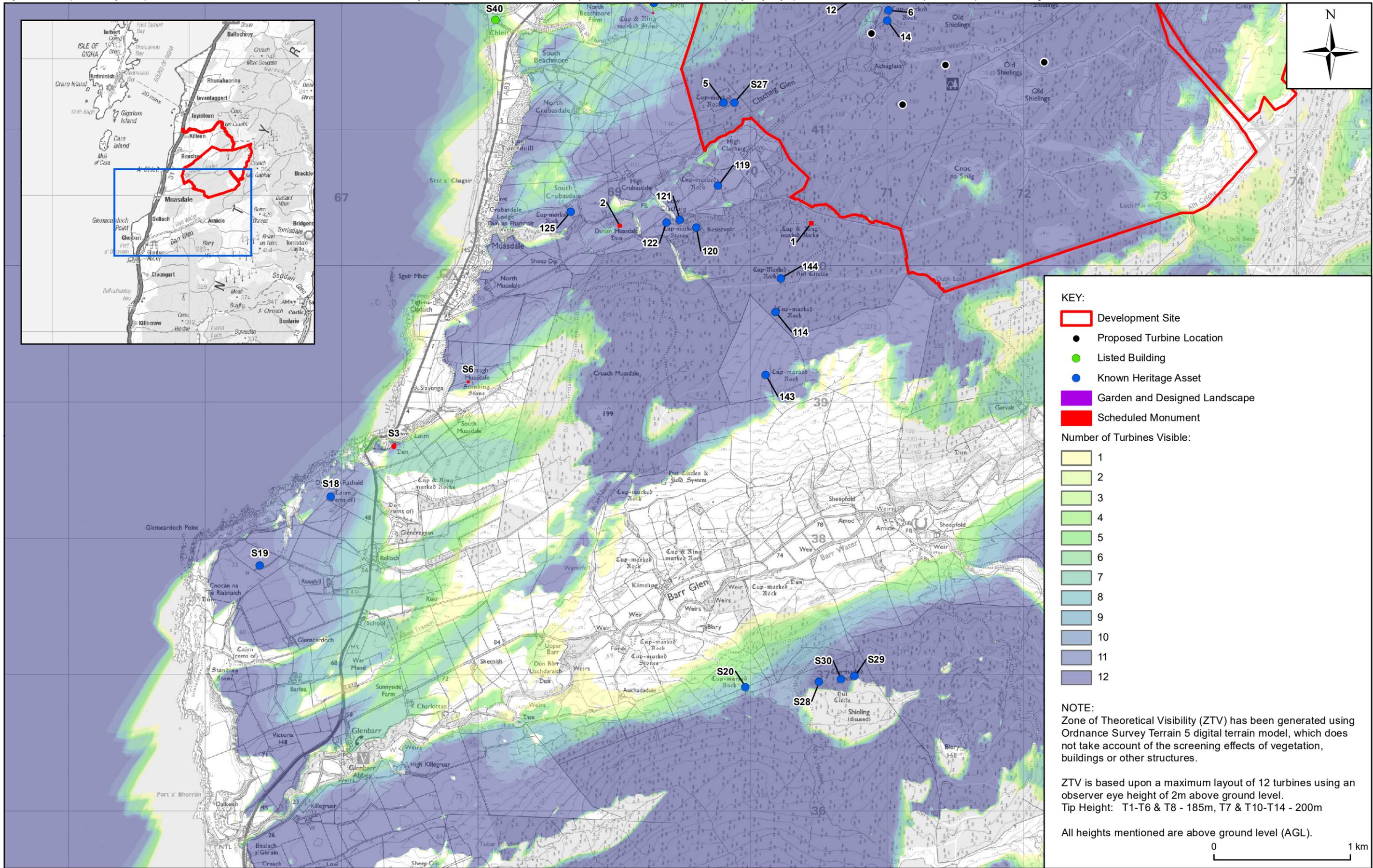
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Client:	<b>RWE</b>
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Title:	FIGURE 12.3 SETTING SITES WITHIN THE ZONE OF THEORETICAL VISIBILITY (ZTV) SHEET 3 OF 5
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- KEY:**
- Development Site
  - Proposed Turbine Location
  - Listed Building
  - Known Heritage Asset
  - Garden and Designed Landscape
  - Scheduled Monument

- Number of Turbines Visible:**
- 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
  - 11
  - 12

**NOTE:**  
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ZTV is based upon a maximum layout of 12 turbines using an observer eye height of 2m above ground level.  
 Tip Height: T1-T6 & T8 - 185m, T7 & T10-T14 - 200m

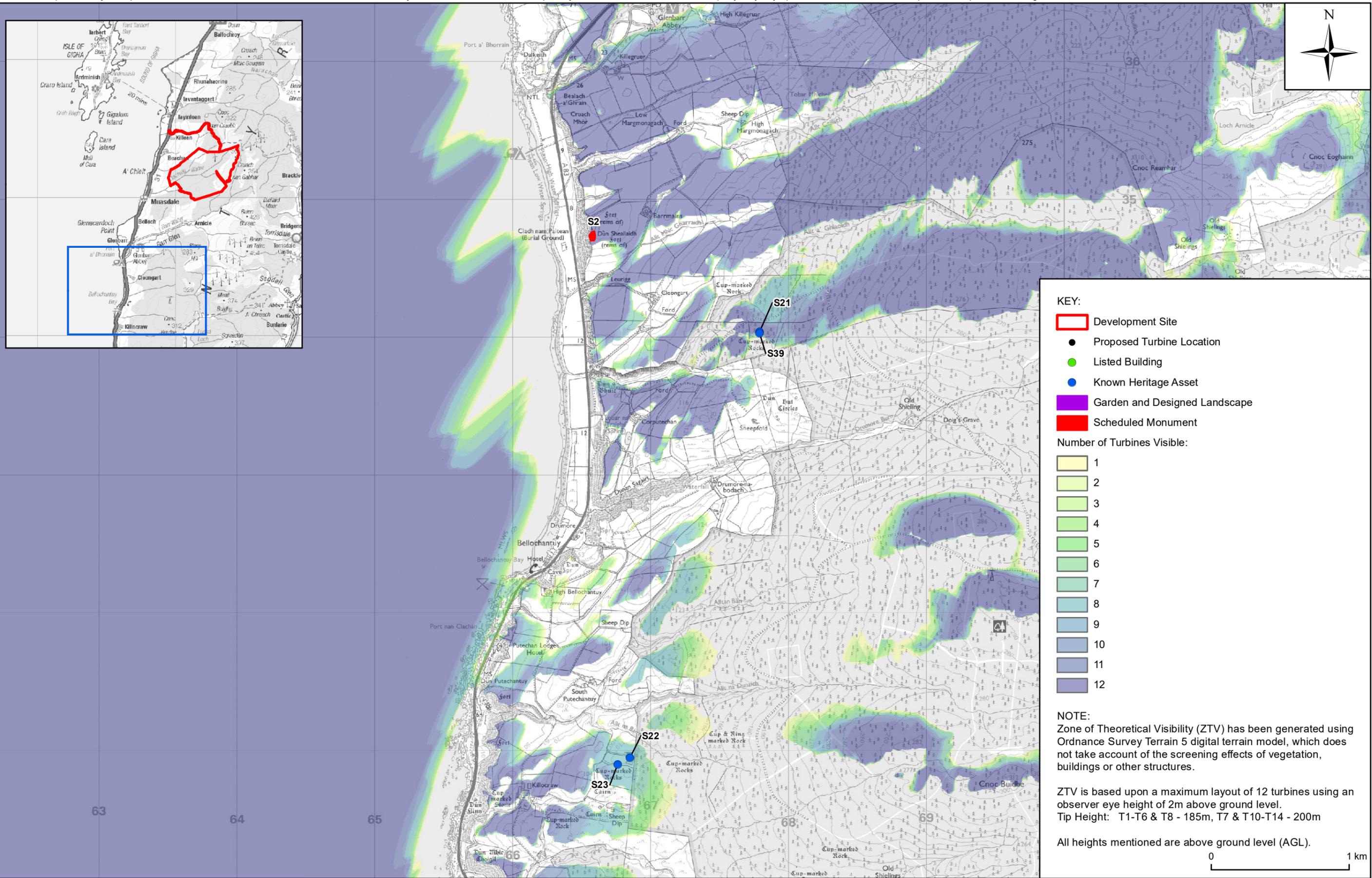
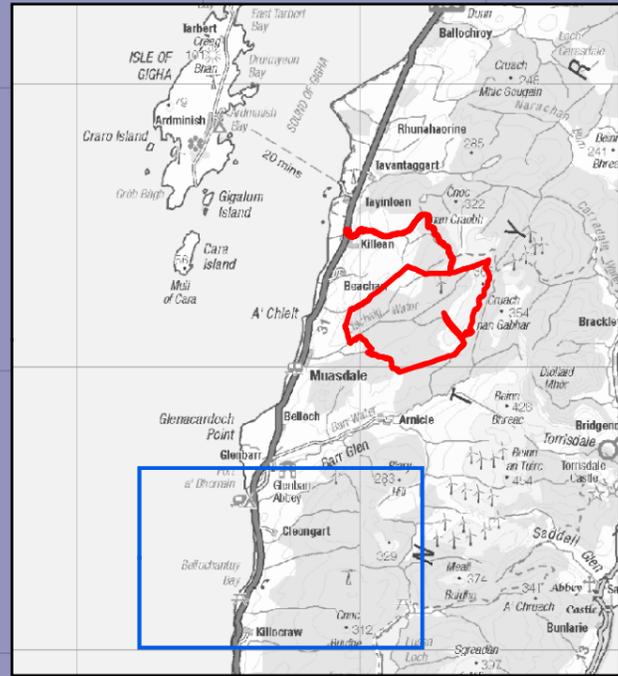
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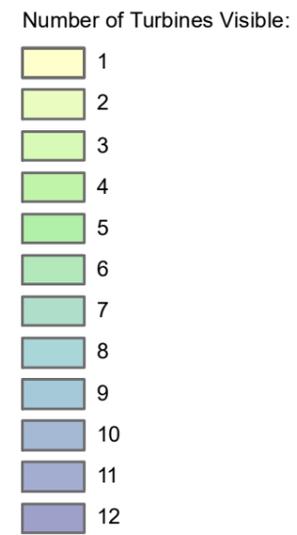
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- KEY:**
- Development Site
  - Proposed Turbine Location
  - Listed Building
  - Known Heritage Asset
  - Garden and Designed Landscape
  - Scheduled Monument



**NOTE:**  
Zone of Theoretical Visibility (ZTV) has been generated using Ordnance Survey Terrain 5 digital terrain model, which does not take account of the screening effects of vegetation, buildings or other structures.

ZTV is based upon a maximum layout of 12 turbines using an observer eye height of 2m above ground level.  
Tip Height: T1-T6 & T8 - 185m, T7 & T10-T14 - 200m

All heights mentioned are above ground level (AGL).  
0 1 km

Client:	<b>RWE</b>
Project:	CLACHAIG GLEN WIND FARM ENVIRONMENTAL IMPACT ASSESSMENT

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