



gwerth mewn gwahaniaeth  
delivering on distinction

## Morlais Project

# Onshore Archaeology Settings Assessment for Offshore Infrastructure

Applicant: Menter Môn Morlais Limited

Document Reference: PB5034-RHD-ZZ-XX-NT-Z-1012

Author: Royal HaskoningDHV



Morlais Document No.  
MOR/RHDHV/DOC/0125

Status:  
FINAL

Version No:  
F1.0

Date:  
26/03/2020

© 2020 Menter Môn This document is issued and controlled by:

Morlais, Menter Môn. Registered Address: Llangefni Town Hall, Anglesey, Wales, LL77 7LR, UK

Unauthorised copies of this document are NOT to be made

Company registration No: 03160233 Requests for additional copies shall be made to Morlais Project

[Page left intentionally blank]

## 1 Background and Purpose of Document

The Isle of Anglesey County Council (IoACC) Representation to the draft order made by Menter Môn Morlais Ltd. (under the Transport and Works Act Order - TWAO - 1992) for the Morlais Demonstration Zone (IoACC Energy Island Project Management Office, Regulation and Economic Development, October 2019), included within Section 8 comments on Onshore Archaeology and Cultural Heritage. The most detailed and material comments from IoACC relate to the impact on the heritage significance of coastal heritage assets as a result of a change in their setting from the presence of offshore infrastructure.

In addition to the IoACC Representation (October 2019), Gwynedd Archaeological Planning Services (GAPS), as archaeological advisers to IoACC, also reiterated their comments from the IoACC representation, particularly in respect to offshore setting impacts and effects, within their response to Natural Resources Wales (January 2020) with reference to the Marine Licence.

In summary, the primary concerns raised via the above communications are as follows:

- It is considered that the impact of the offshore development on the settings of the listed buildings at South Stack and Ellin's Tower have been underestimated:
  - As Grade II listed buildings, both sites are considered to be of high importance;
  - Their shared and individual coastal settings are considered to make a high contribution to their significance;
  - Their location and visual surroundings are fundamental to their origin, purpose, design and appreciation; and
  - This is particularly true for night-time views, where the lighthouse beam is presently the only light.
- With the exception of South Stack and Ellin's Tower, impacts of the offshore infrastructure on the settings of heritage assets has been overlooked:
  - Other heritage assets with intervisibility include Caer y Twr (scheduled monument AN019), Holyhead Mountain hut circles (scheduled monument AN016) and potentially Gogarth Bay round cairn (scheduled monument AN147), all of which were scoped out of the settings assessment within ES Chapter 20 Onshore Archaeology and Cultural Heritage.
- The assessment of the impacts on the settings of the assets identified in Tables 20-8, 20-9 and 20-10 needs to be reviewed, especially with regard to offshore infrastructure and where assets are scoped out, this must be fully justified.

GAPS have advised that decisions on both the TWAO/Deemed Planning Consent and Marine Licence should not be made until an appropriate assessment of impact on the setting [of heritage assets as a result of the offshore infrastructure] has been provided to “*demonstrate acceptability or otherwise of the principle of the proposed scheme*”.

It is worth noting Cadw's response to the marine licence for the Morlais Tidal Array stated:

*“The application is accompanied by an environmental statement which includes chapter 13 Offshore Archaeology and Cultural Heritage and chapter 20 Onshore Archaeology and Cultural Heritage. This information concludes that there will be no direct impact on any designated heritage assets: There will be some negligible and minor impacts on the settings of a number of designated heritage assets during the*

*construction phase of the development but these will be temporary. However, the proposed development will have a permanent minor to moderate adverse impact on the settings of Listed Buildings 5713 Ellins Tower, 5284 South Stack Lighthouse and a minor adverse impact on Listed Building 20081 Tany-y-Cytiau. It will also have permanent minor adverse impact on the setting of scheduled monument AN016 Holyhead Mountain Hut Circles. None of these adverse impacts will be significant. We concur with these conclusions.”*

In response to these responses, this supplementary note has been prepared to provide additional clarity on the assessment of the impact of the offshore infrastructure upon heritage assets. The assessment follows the staged approach as set out in the CADW guidance on assessing the setting of heritage assets:

- Welsh Government, Historic Environment Service (Cadw) (2017) Setting of Historic Assets in Wales. Available at URL: <https://cadw.gov.wales/sites/default/files/2019-05/Setting%20of%20Historic%20Assets%20in%20Wales%20EN.pdf>.

The assessment is specifically informed by a site visit to Holy Island, Isle of Anglesey undertaken by the Royal HaskoningDHV Heritage Consultant on the 4<sup>th</sup> and 5<sup>th</sup> March 2020. Where appropriate this note also draws upon the information set out in the Morlais Project Environmental Statement (ES) Chapter 20: Onshore Archaeology and Cultural Heritage and the accompanying Desk Based Assessment (DBA) prepared by Wessex Archaeology and included in the ES as Appendix 20.1. This note also draws upon the conclusions of Chapter 24: Seascape, Landscape and Visual Impact Assessment (SLVIA) in considering potential visual impacts and the results of post-application consultation which have looked to reduce the potential seascape, landscape and visual effects of the Project where possible.

With regards to consultation responses which are not directly concerned with the setting of heritage assets from offshore infrastructure, these are addressed in the following:

- The GAPS comments relating to the Wessex Archaeology DBA have been addressed directly by Wessex Archaeology (provided in document no. MOR/WES/DOC/0001); and
- A separate supplementary note has been prepared by Royal HaskoningDHV to address comments associated with archaeological potential (Document no. MOR/RHDHV/DOC/0122).

In addition, Menter Môn has commissioned the services of Gwynedd Archaeological Trust (GAT) to undertake Archaeological Geophysical Survey (onshore), and there is an ongoing line of communication between GAT (as archaeological contractor to Menter Môn) and GAPS (as archaeological adviser to IoACC) to inform any further requirements.

## **2 Stage 1: Identify the Historic Assets**

### **2.1 Selecting Assets for Review**

Prior to the site visit (March 2020), an initial desk-based screening of heritage assets was undertaken to identify those which could be scoped out of further assessment without further ground truthing.

The study area for the DBA and ES Chapter 20 comprises the onshore cable corridor and the boundary of substation locations plus a 1 km buffer. This led to the identification of key heritage assets which were taken forward for further assessment in the ES predominantly in relation to onshore infrastructure. These are illustrated in Figure 20-3 in Volume II of the ES which is included below.

In further consideration of the offshore infrastructure, due to the distance from the offshore infrastructure and intervening buildings and landscape, only those heritage assets to the west and north west of the village Penrhos Feilw (shown on Figure 20-4) have been considered further as part of this additional Stage 1 assessment. At Penrhos Feilw itself, the view westwards from the standing stones at Penrhos Feilw (RHDHV11 on Figure 20-4) contains many features which block the view (existing hedgerows across the landscape and buildings at Bodwarren), whilst the view from Penrhos Feilw Chapel (RHDHV36 on Figure 20-4) is similarly limited by intervening landscape and vegetation cover. Also, as concluded in the Wessex Archaeology DBA, the setting of the Ples Meilw Hut Circles (scheduled monument AN33) to the east of the standing stones is limited to within the narrow valley within which the site is located.

This reduced intervisibility to the west and north west of Penrhos Feilw is supported by the conclusions of the SLVIA. For the Seascape Character Area (SCA) 14 (Rhoscelyn) which comprises the majority of Holy Island and the adjacent coastal waters to the west and south (to the south of Holyhead Mountain and Holyhead) the arrays of tidal energy devices and associated structures would only form prominent elements in views from a small area in the northern part of the SCA (between Penrhyn Mawr and Pen-las Rock, west and north west of Penrhos Feilw).

The following key heritage assets, therefore, were visited and reviewed for inclusion in the revised settings assessment as part of Stage 1:

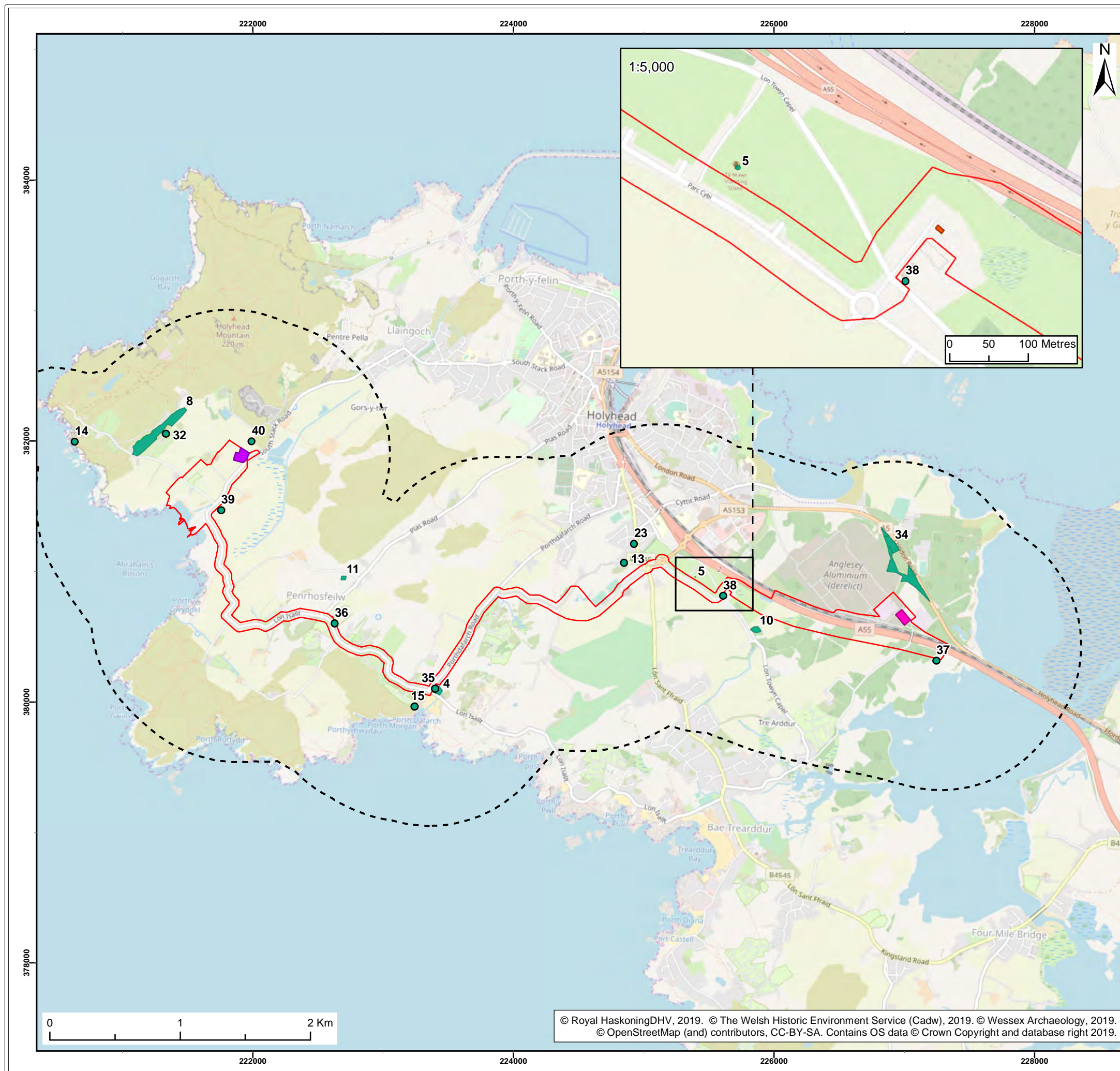
- RHDHV1 South Stack Lighthouse group (all Grade II Listed Buildings);
- RHDHV8 Holyhead Mountain Hut Circles (scheduled monument AN16);
- RHDHV14 Ellin's Tower (Twr Ellin) (Grade II Listed Building);
- RHDHV32 Tan-y-Cytiau (Grade II Listed Building);
- RHDHV39 Cist burial, remains of hut circles and finds (non-designated); and
- RHDHV40 Remains of hut circles and finds (non-designated).

In addition to the above, the following designated heritage assets within (or just outside) the SLVIA SCA 13 (Holyhead Mountain) which comprises the north west part of Holy Island and the adjacent coastal waters to the north and north west and eastwards to the Holyhead Breakwater were also visited to determine any potential for likely impacts to their setting:

- Gogarth Bay round cairn (scheduled monument AN147);
- Caer y Twr (scheduled monument AN019);
- Enclosed Hut Circle Settlement at Capel Llochwydd (scheduled monument AN133);
- Gunpowder magazine (Grade II Listed Building);
- Former Power Magazine (Grade II Listed Building);
- Holyhead Breakwater (Grade II\* Listed Building); and
- Soldiers Point House (Grade II Listed Building).

Although the SLVIA recognises that the tidal devices and associated structures would introduce man-made features in the wider seascape, it is also acknowledged that the prominence of the structures would be variable throughout the Holyhead Mountain SCA.

As concluded in Chapter 24 of the ES, potential effects within further SLVIA character areas which overlap with onshore areas are predicted to be negligible to minor and, therefore, not significant.



Legend:

- Onshore Development Area
- Grid Connection Substation
- Landfall Substation
- Switchgear Building
- Onshore Cultural Heritage Study Area

Key Heritage Assets

- Point
- Polygon

Client:   Project: 

Title:

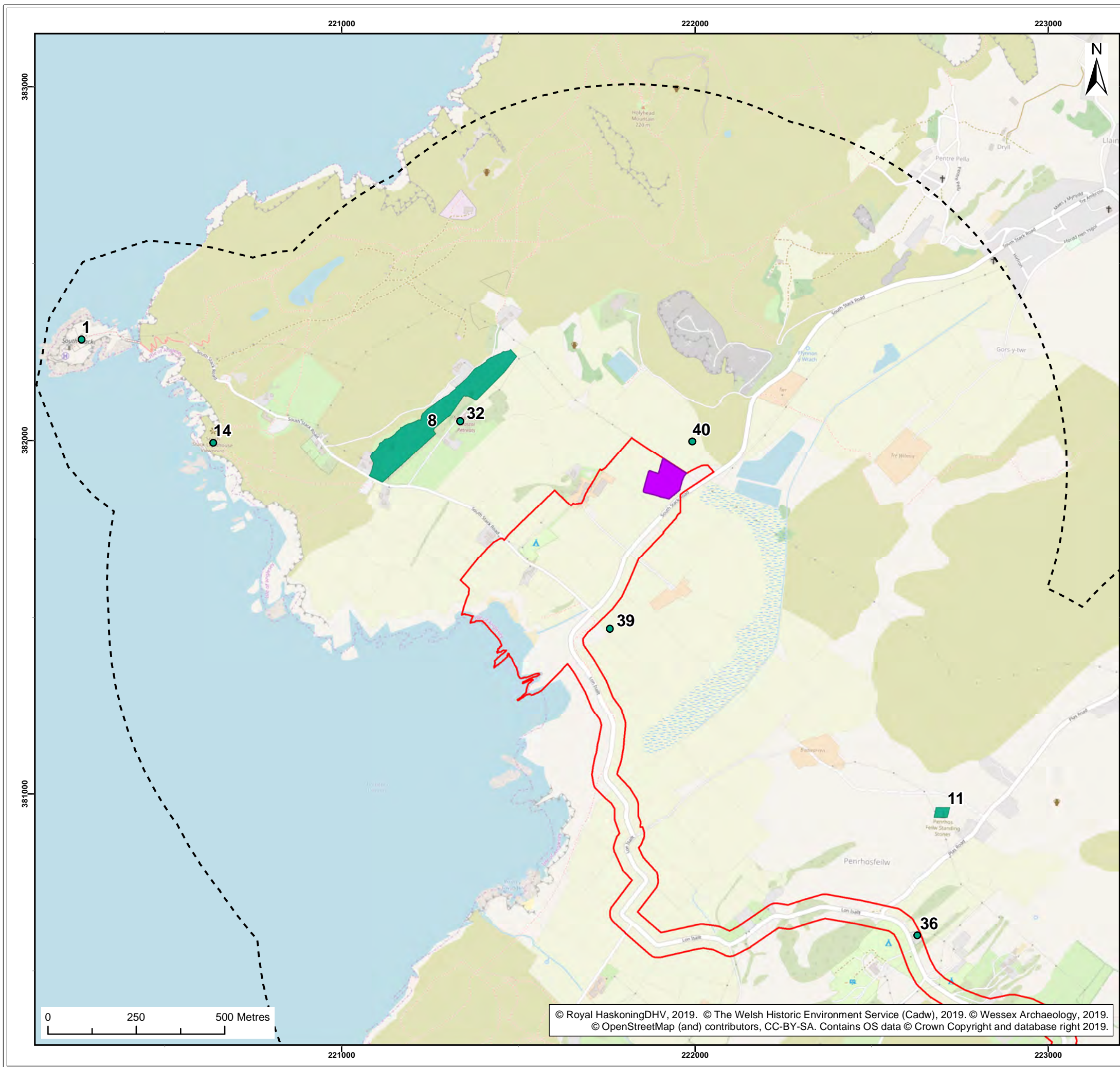
Key Heritage Assets within the Study Area

Figure: 20-3 Drawing No: PB5034-ES-020-003

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
04	08/07/19	LB	PM	A3	1:30,000
03	02/07/19	JT	PM	A3	1:30,000

Co-ordinate system: British National Grid

 **ROYAL HASKONINGDHV**  
INDUSTRY & BUILDINGS  
2 ABBEY GARDENS  
GREAT COLLEGE STREET  
WESTMINSTER  
LONDON  
SW1P 3NL  
+44 (0)20 7222 2115  
www.royalhaskoning.co.uk



Legend:

- Onshore Development Area
- Grid Connection Substation
- Landfall Substation
- Switchgear Building
- Onshore Cultural Heritage Study Area

Key Heritage Assets

- Point
- Polygon

Client:   Project: 

Title:

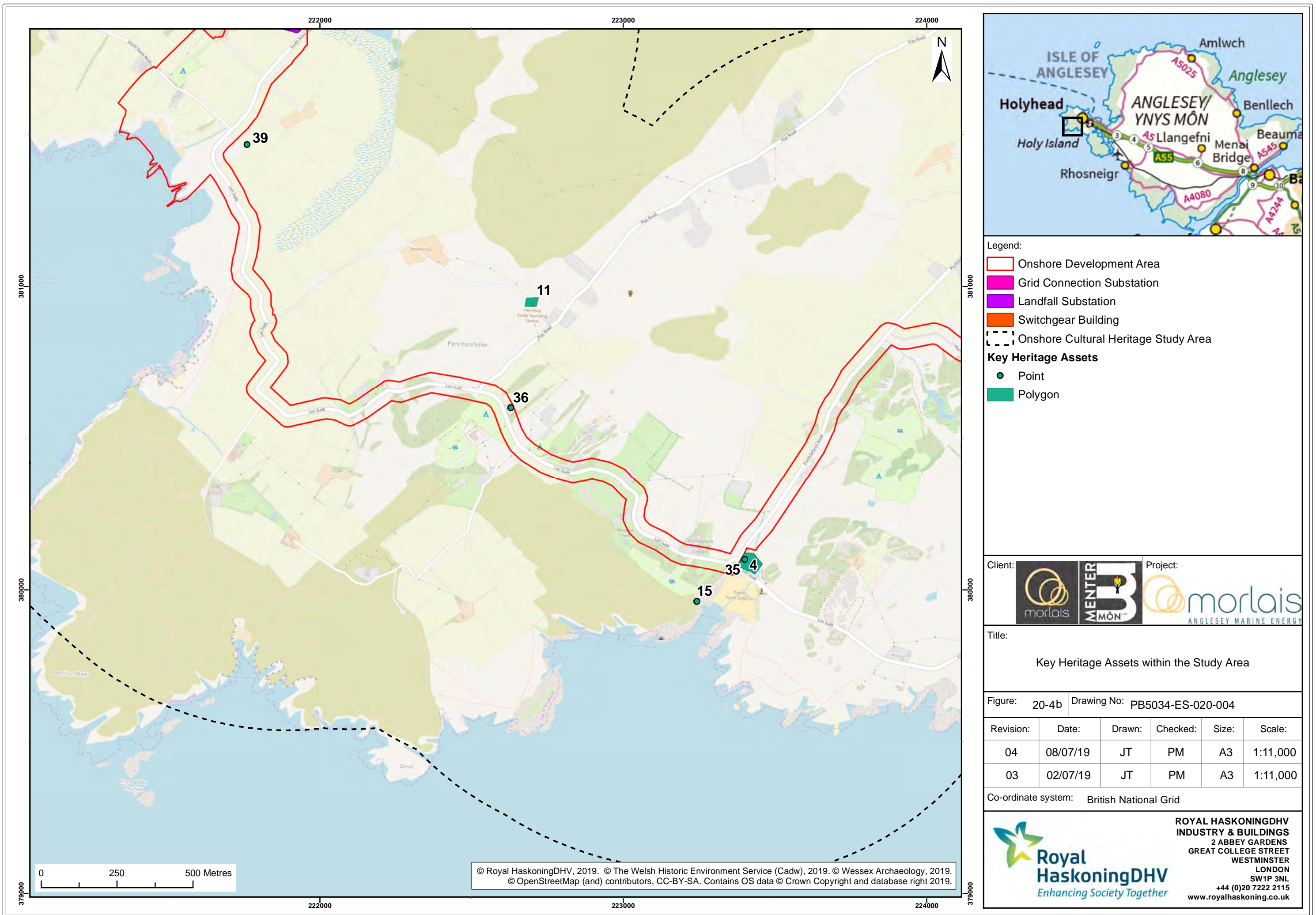
Key Heritage Assets within the Study Area

Figure: 20-4a Drawing No: PB5034-ES-020-004

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
04	08/07/19	JT	PM	A3	1:11,000
03	02/07/19	JT	PM	A3	1:11,000

Co-ordinate system: British National Grid

 **ROYAL HASKONINGDHV**  
INDUSTRY & BUILDINGS  
2 ABBEY GARDENS  
GREAT COLLEGE STREET  
WESTMINSTER  
LONDON  
SW1P 3NL  
+44 (0)20 7222 2115  
www.royalhaskoning.co.uk



Legend:

- Onshore Development Area
- Grid Connection Substation
- Landfall Substation
- Switchgear Building
- Onshore Cultural Heritage Study Area

**Key Heritage Assets**

- Point
- Polygon

Client:   Project: 

Title:

Key Heritage Assets within the Study Area

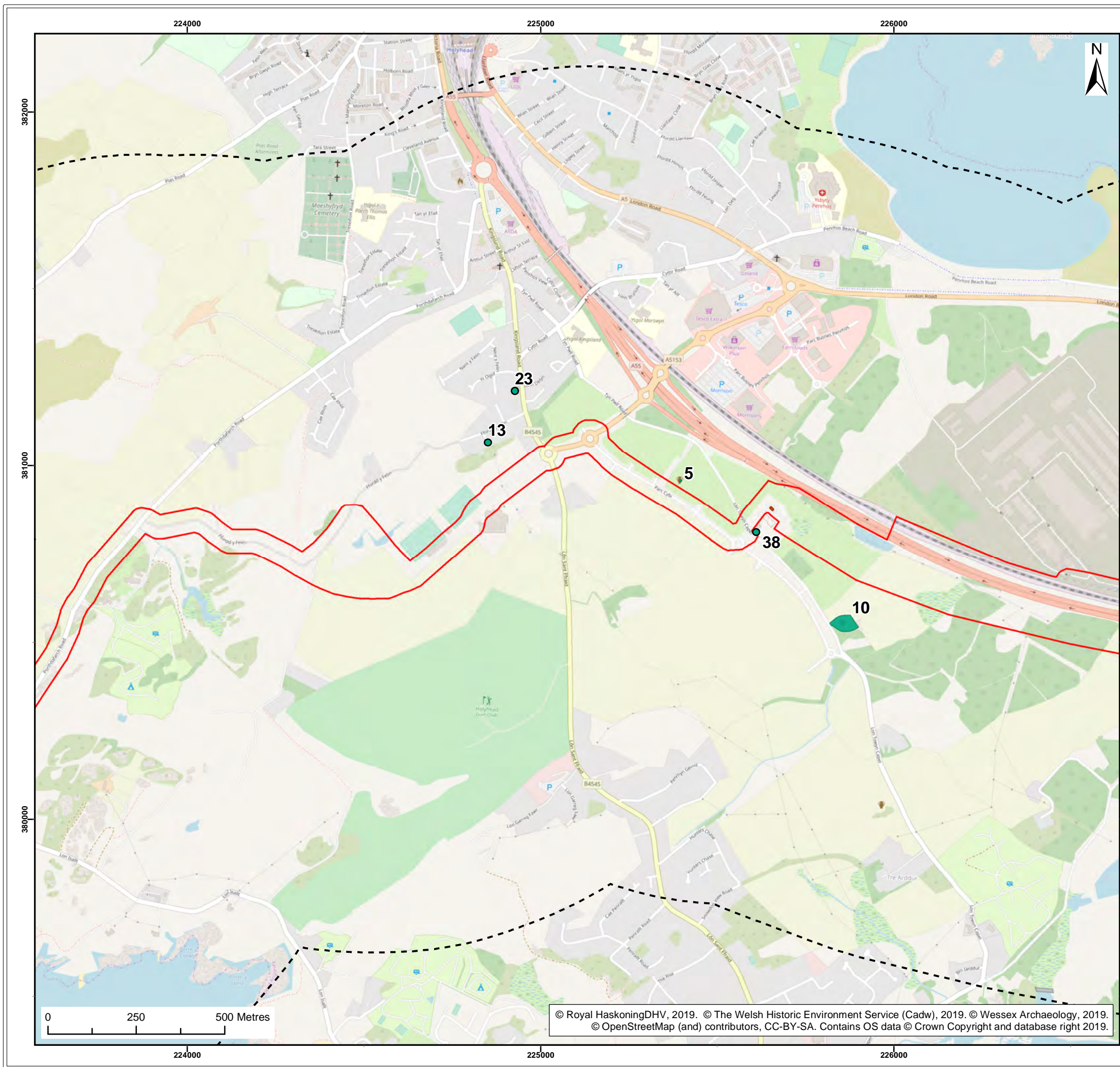
Figure: 20-4b Drawing No: PB5034-ES-020-004

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
04	08/07/19	JT	PM	A3	1:11,000
03	02/07/19	JT	PM	A3	1:11,000

Co-ordinate system: British National Grid



**ROYAL HASKONINGDHV**  
INDUSTRY & BUILDINGS  
2 ABBEY GARDENS  
GREAT COLLEGE STREET  
WESTMINSTER  
LONDON  
SW1P 3NL  
+44 (0)20 7222 2115  
www.royalhaskoning.co.uk



Legend:

- Onshore Development Area
- Grid Connection Substation
- Landfall Substation
- Switchgear Building
- Onshore Cultural Heritage Study Area

Key Heritage Assets

- Point
- Polygon

Client:



Project:

Title:

Key Heritage Assets within the Study Area

Figure:

20-4c

Drawing No:

PB5034-ES-020-004

Revision:

Date:

Drawn:

Checked:

Size:

Scale:

04

08/07/19

JT

PM

A3

1:11,000

03

02/07/19

JT

PM

A3

1:11,000

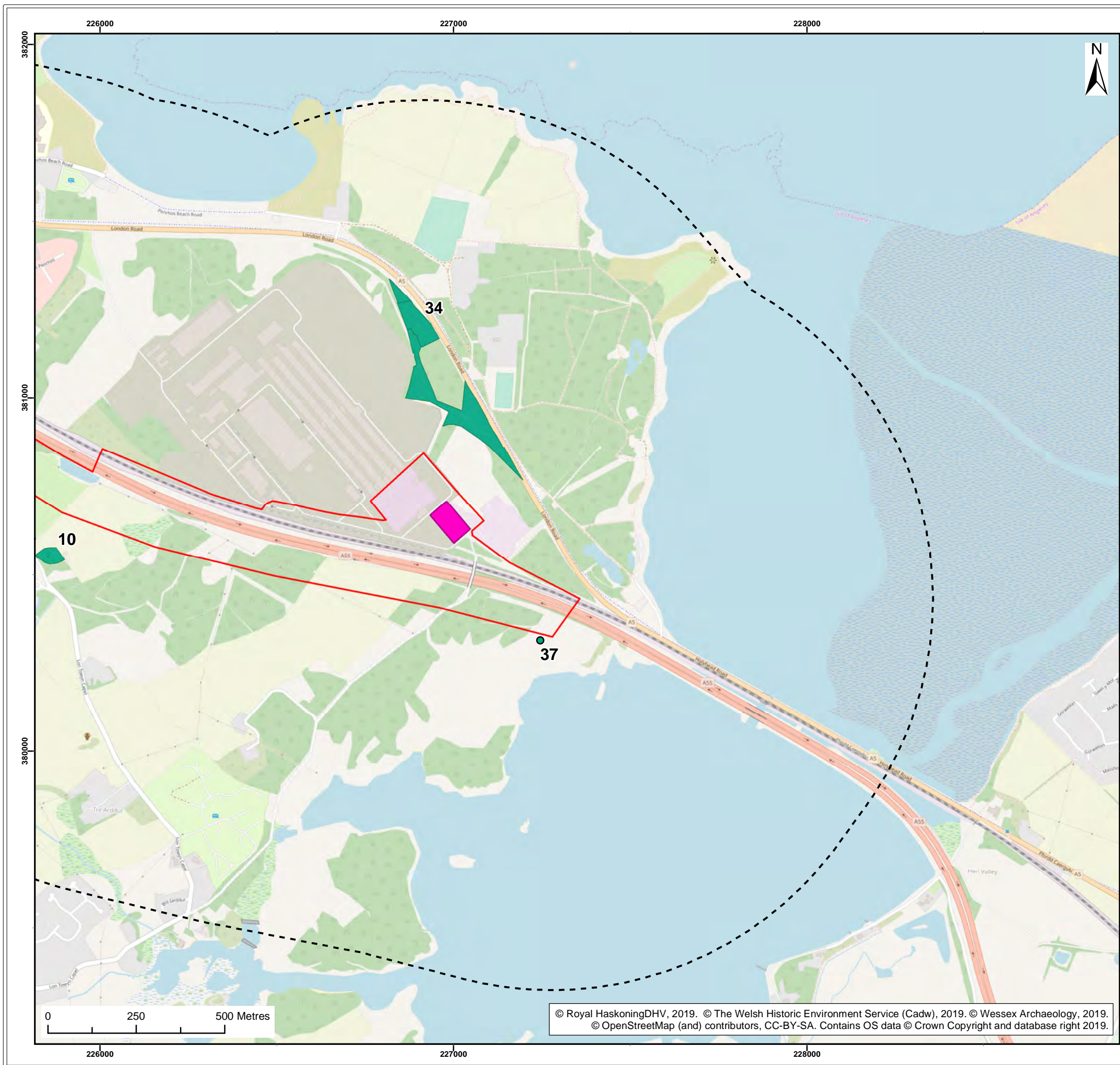
Co-ordinate system:

British National Grid



ROYAL HASKONINGDHV  
INDUSTRY & BUILDINGS  
2 ABBEY GARDENS  
GREAT COLLEGE STREET  
WESTMINSTER  
LONDON  
SW1P 3NL  
+44 (0)20 7222 2115  
www.royalhaskoning.co.uk

© Royal HaskoningDHV, 2019. © The Welsh Historic Environment Service (Cadw), 2019. © Wessex Archaeology, 2019.  
© OpenStreetMap (and) contributors, CC-BY-SA. Contains OS data © Crown Copyright and database right 2019.






Legend:

- Onshore Development Area
- Grid Connection Substation
- Landfall Substation
- Switchgear Building
- Onshore Cultural Heritage Study Area

**Key Heritage Assets**

- Point
- Polygon

Client:   Project: 

Title:

Key Heritage Assets within the Study Area

Figure: 20-4d Drawing No: PB5034-ES-020-004

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
04	08/07/19	JT	PM	A3	1:11,000
03	02/07/19	JT	PM	A3	1:11,000

Co-ordinate system: British National Grid



**ROYAL HASKONINGDHV**  
INDUSTRY & BUILDINGS  
2 ABBEY GARDENS  
GREAT COLLEGE STREET  
WESTMINSTER  
LONDON  
SW1P 3NL  
+44 (0)20 7222 2115  
www.royalhaskoning.co.uk

## **2.2 Review of Selected Assets**

### **2.2.1 RHDHV1 South Stack Lighthouse group**

As concluded in Chapter 20 of the ES, the Listed Buildings at south stack have clear intervisibility with the offshore elements of the scheme and are retained for further assessment in Stage 2.

### **2.2.2 RHDHV8 Holyhead Mountain Hut Circles**

Viewpoint 05 (Figure 24-3-5b, included in Section 4 below) from the SLVIA Chapter 24 of the ES demonstrates that there is some limited intervisibility with offshore elements of the scheme from the hut circles and these are therefore retained for assessment in Stage 2.

### **2.2.3 RHDHV14 Ellin's Tower (Twr Ellin)**

As concluded in Chapter 20 of the ES, the Listed Buildings at south stack have clear intervisibility with the offshore elements of the scheme and are retained for further assessment in Stage 2.

### **2.2.4 RHDHV32 Tan-y-Cytiau**

As observed during the site visit (March 2020), views towards the offshore infrastructure from this early 20<sup>th</sup> century Grade II Listed Building, located to the east of the Hut Circles (RHDHV8), are obscured by the intervening landscape (including topography) and, due to the lack of intervisibility, this heritage asset is scoped out of further assessment.

### **2.2.5 RHDHV39 Cist burial, remains of hut circles and finds**

As observed during the site visit (March 2020), the distance of this asset location from the Marine Demonstration Zone and the nature of the intervening landscape (including topography) mean that settings related impacts will not occur.

### **2.2.6 RHDHV40 Remains of hut circles and finds**

As observed during the site visit (March 2020), the distance of this location from the Marine Demonstration Zone and the nature of the intervening landscape (including topography) mean that settings related impacts will not occur.

### **2.2.7 Gogarth Bay round cairn (scheduled monument AN147)**

During the site visit (March 2020), views to the west were observed as largely obscured by South Stack meaning that intervisibility would be limited to the three electrical hubs in the north of the Marine Demonstration Zone, in the zones where all other devices would be submerged. Although views are limited, this heritage asset has been retained for further assessment.

### **2.2.8 Caer y Twr (scheduled monument AN019)**

Viewpoint 01 (Figures 24-3-1a and 24-3-1b included in Section 4 below) from the SLVIA Chapter 24 of the ES demonstrates that there is intervisibility with offshore elements and this heritage assets is therefore retained for assessment in Stage 2.

### **2.2.9 Enclosed Hut Circle Settlement at Capel Llochwydd (scheduled monument AN133)**

Located on lower ground to the east of the Gogarth Bay round cairn, views to the west were also observed as largely obscured by South Stack, to a far greater extent than the cairn. No remains of this site are easily identifiable on the ground (possibly due to vegetation cover) and appreciation of the asset itself *in situ* is, therefore, limited. For these reasons, this monument is scoped out of further assessment.

### **2.2.10 Gunpowder magazine (Grade II Listed Building)**

As observed during the site visit (March 2020), views towards the Marine Demonstration Zone to the west from the gunpowder magazine are obscured by intervening landscape and this heritage asset is, therefore, scoped out of further assessment.

### **2.2.11 Former Power Magazine (Grade II Listed Building)**

Viewpoint 02 (Figures 24-3-2a and 24-3-2b included in Section 4 below) from the SLVIA Chapter 24 of the ES demonstrates that there is intervisibility with offshore elements and this heritage asset is therefore retained for assessment in Stage 2.

### **2.2.12 Holyhead Breakwater (Grade II\* Listed Building)**

As observed during the site visit (March 2020), distant views towards the Marine Demonstration Zone to the west from the Breakwater are obscured by intervening landscape and this heritage asset is, therefore, scoped out of further assessment. As concluded in the SLVIA Chapter 24 of the ES, even at night visual effects would be minor and not significant.

### **2.2.13 Soldiers Point House (Grade II Listed Building)**

As observed during the site visit (March 2020), views towards the Marine Demonstration Zone to the west from the Breakwater are obscured by intervening landscape and this heritage asset is, therefore, scoped out of further assessment.

## **3 Stage 2: Define and Analyse the Setting**

A narrative description of the setting of each of the heritage assets retained for further assessment and the contribution that setting makes to its significance is included below.

### **3.1 RHDHV1 South Stack Lighthouse group**

In Chapter 20 of the ES (Section 20.5.5.1) this group is described as follows:

*This group of assets are located on a small outcrop off the north-west limits of Holy Island. The current setting of the group is one of open coastland, with rocky cliffs dropping away to a wide seascape. The lighthouse is accessed by a narrow footpath from a country lane. There is intervisibility with Ellin's Tower to the south-east, whilst impressive views of the lighthouse are obtained from the mainland, with the outcrop the lighthouse is built upon set lower than the main island. There are expansive views out from the lighthouse to the sea. There are no significant views inland from the lighthouse, due to the local topography. Currently, the setting makes a moderate contribution to the medium historic and architectural interest of the group.*

As set out in the representations to the ES, it is the view of IoACC and GAPS that these are considered of high importance as a group of Grade II Listed Buildings and that their shared and individual coastal settings make a high contribution to their significance, their location and visual surroundings being fundamental to their origin, purpose, design and appreciation.

The South Stack lighthouse was closed to visitors at the time of the site visit (March 2020) and it was only possible to access the approach down to the lighthouse up to the bridge across to the island. Nonetheless, the coastal setting and views across the seascape towards and beyond the lighthouse could be easily appreciated, including those toward Ellin's Tower (see examples in **Plates 1 to 3** below).

As noted in ES Chapter 20, the asset's primary design-purpose is to be seen from the sea, rather than from the lighthouse out to sea (e.g. as a viewing platform). The setting of the lighthouse upon the rocky outcrop is key to understanding its navigational function for mariners, both historically and today. This includes the setting of the lighthouse and former keeper's accommodation within its group setting, associated with individual listed assets including the series of enclosure walls associated with the lighthouse, a storehouse, former oil store and the two towers either side of the bridge which links with the mainland. Following automation of the lighthouse, and the consequent redundancy of many of these associated structures, the island was made accessible to the public and, following the construction of a new bridge in 1996, a visitors centre opened in 1997 in order to provide funds to secure the long term maintenance and survival of the listed structures.

Ellin's Tower (RHDHV14), whilst featuring within views to the south from the Lighthouse, is not associated with the Lighthouse group in terms of original function and design, being built as a summer house in 1868 for Ellin, wife of The Honorable W Owen Stanley M.P., of Penrhos.

Whilst the coastal setting of this group is fundamental to understanding its original function and design, the views seawards, and towards Ellin's Tower, contribute more to its current appreciation as a visitor attraction (putting this more in the bracket of recreational and visual amenity) rather than its historical purpose as a navigational feature. There is a very obvious and tangible relationship with the seascape, however, and this contributes to our ability to appreciate the significance of the asset group.

In revised summary, the asset groups' coastal setting is considered to make a moderate to high contribution to the significance of this high value group of heritage assets.

***Plate 1: View toward South Stack Lighthouse from the South Stack Car Park (05/03/2020)***



***Plate 2 View towards South Stack Lighthouse from the approach path (04/03/2020)***



**Plate 3 View towards Ellin's Tower from the path down towards the South Stack Lighthouse (04/03/2020)**



### **3.2 RHDHV8 Holyhead Mountain Hut Circles**

The Holyhead Mountain (Cytiau'r Gwyddelod) hut circles (scheduled monument AN16) are described in the Wessex Archaeology DBA (Appendix 20.1 Section 4.2) as follows:

*At the western end of the proposed development [onshore], the scheduled Holyhead Mountain hut circles sit at the top of a ridge with the land dropping away to the south-east and southwest. The settlement sits on a natural terrace and the site has a display panel. The scheduling description suggests that 'the remains of a terraced field system can be seen underlying the present fields on the slopes below the settlement.'. The scheduling description describes the monument as being of national importance for its evidential values, especially its potential to enhance knowledge of later prehistoric defensive organisation and settlement, archaeological evidence concerning chronology and buildings techniques, and environmental evidence. The monuments will also have historical value as they tell the story of prehistoric settlement, embedded within a wider landscape containing still-legible agricultural and monumental elements.*

*The setting of the settlement makes a moderate contribution to the significance of this asset, in particular to its relationship with the surrounding contemporary field system, and its location on the natural terrace which is a naturally defensible location. The current setting enhances the historical value of the asset by allowing visitors to experience and understand elements of a prehistoric landscape, which in turn enables appreciation of the monument's significance.*

Approached through a gate from the road, the visitor walks uphill into the hut circles (**Plate 4** and **Plate 5**). During the site visit (March 2020) it was observed that views are largely constrained within the area of the hut circles with external views curtailed by the presence of elevated landscape topography (**Plate 6**). As

described by Wessex Archaeology above, their significance (including their setting) is not primarily associated with the coastal location and views of the sea, but rather its construction enabling an understanding the monuments within a prehistoric landscape using natural terraces as a defensible location. There are two main external views from the site, north east towards Holyhead Mountain and south west towards the sea (including both glimpses but with a clear and open view from an elevated position above the site).

***Plate 4: Gated entrance and sign from the road towards the Hut Circles (0503/2020)***



***Plate 5 Approach uphill towards the Hut Circles (05/03/2020)***



5

***Plate 6 Views largely internal to the monuments (05/03/2020)***



***Plate 7 View north east towards Holyhead Mountain (05/03/2020)***



***Plate 8 View south west towards the sea (04/03/2020)***



### 3.3 RHDHV14 Ellin's Tower (Twr Ellin)

In Chapter 20 of the ES (Section 20.5.5.1) this heritage asset is described as follows:

*Ellin's Tower (Twr Ellin) is a Grade II listed picturesque castellated folly, built in 1868. It is now used as an information centre and observation tower for the Royal Society for the Protection of Birds (RSPB). The current setting is currently one of major seascape views, located on the cliff edge. The area is often busy with the general public due to the tower's use as an information point. Currently, the setting of the asset makes a high contribution to its medium historic and architectural interest. There are no views towards inland, due to the local topography.*

As for the South Stack Lighthouse above, as set out in the representations to the ES, it is the view of IoACC and GAPS that this is considered of high importance as a Grade II Listed Building and that its shared and individual coastal setting with the South Stack group make a high contribution to their significance, their location and visual surroundings being fundamental to their origin, purpose, design and appreciation.

In revised/revisited summary, the primary current use of the building is as an RSPB information and observation tower (**Plate 9**) with the views of the surrounding cliffs and lighthouse being noted as a primary attraction for visitors. The setting and views across the seascape towards and beyond the lighthouse, and towards the south are considered to remain fundamental to its original design and function as a summer house (see examples in **Plates 1 to 3** below). The primary reasons for the listing (and where it derives its principal heritage significance from), however, are noted as being its retained character as a 19<sup>th</sup> century folly and for being of particular local interest for its connection with the Stanley family of Penrhos.

**Plate 9 View from bird observation point inside Ellin's Tower (04/03/2020)**



**Plate 10 View to south with Ellin's Tower in view (04/03/2020)**



### **3.4 Gogarth Bay round cairn (scheduled monument AN147)**

The Gogarth Bay round cairn (scheduled monument AN17) is described in the Wessex Archaeology DBA (Appendix 20.1 Section 4.2) as follows:

*The monument comprises the remains of a burial cairn, probably dating to the Bronze Age and dramatically situated on the summit of a locally prominent ridge overlooking the cliffs of Gogarth Bay. The monument is of national significance, which derives principally from its evidential value, for its potential to enhance our knowledge of prehistoric burial and ritual practices. The well-preserved monument is an important relic of a prehistoric funerary and ritual landscape and retains significant archaeological potential, with a strong probability of the presence of both intact burial or ritual deposits and environmental and structural evidence.*

*The natural setting of the monument includes wide-ranging views over the surrounding countryside, particularly to the north. The undeveloped setting of the monument makes a moderate contribution to the significance of this asset, as it enhances the aesthetic and historical value of the asset by allowing visitors to experience and understand the monument within its original landscape, which in turn enables appreciation of the monument's significance. Setting therefore makes a moderate contribution to the significance of this asset.*

During the site visit (March 2020) it was observed that views across the sea to the north and north east (**Plate 11**) form an important part of setting of this heritage asset, although views to the west are curtailed by the South Stack promontory (**Plate 12**). The site is also difficult to access via a barely perceptible path up to the high ridge where it is situated, located to the north of the footpath, and is barely visible from below (**Plate 13**). It is considered, however, that the elevated coastal setting of this heritage asset would have been a deliberate siting choice for this high-status monument.

***Plate 11 View to the north from the Gogarth Bay round cairn (05/03/2020)***



***Plate 12 View west from the Gogarth Bay round cairn towards South Stack (05/03/2020)***



**Plate 13 View from the footpath upwards to the Gogarth Bay round Cairn (05/03/2020)**



### **3.5 Caer y Twr (scheduled monument AN019)**

Caer y Twr (scheduled monument AN17) is described in the Wessex Archaeology DBA (Appendix 20.1 Section 4.2) as follows:

*Caer y Twr comprises an Iron Age hillfort situated on the top of Holyhead Mountain. It is defended by a strong 3 m thick dry-stone wall enclosing some 17 acres. Recent excavation has revealed the possible remains of a Roman signal station on the summit, adjacent to the Ordnance Survey trig point. This monument is of national importance, primarily due to its evidential value which is derived from its potential to enhance our knowledge of prehistoric domestic life, social organisation and defensive practices.*

*Setting makes a substantial contribution to the monument's significance. The hillfort was constructed for defensive purposes, and deliberately sited on the highest point of the island so as to command panoramic views across large areas. Much of the land visible from the hillfort in all directions remains largely undeveloped, although modern elements such as radio towers and agricultural structures do intrude. The views from the hillfort therefore provide a link to the past and demonstrate the relationship between the Iron Age defensive structure and its surrounding agricultural hinterland. Views towards contemporary monuments such as Plas Meilw hut circles (AN33), although long range, enhance understanding of this well-preserved prehistoric landscape.*

During the site visit (March 2020) it was not possible to reach the summit of Holyhead Mountain due to declining weather conditions and practical/time constraints after it proved difficult to locate and climb/scramble the appropriate approach from either the South Stack direction, or from the Breakwater Country Park (**Plate 14**). However, in defining and further analysing the setting of Caer y Twr, Wessex

Archaeology's conclusion that coastal setting makes a high contribution to the significance of this high value heritage asset is considered accurate.

*Plate 14 Approach towards summit of Holyhead Mountain (05/03/2020)*



### **3.6 Former Power Magazine (Grade II Listed Building)**

The Grade II Listed former powder magazine is reached by a rough track over the headland. This heritage asset was not previously considered as part of Chapter 20 or the Wessex Archaeology DBA (Appendix 20.1). The powder magazine was originally built by Trinity House as a store for the charge for the adjacent fog warning cannon and later housed a fog warning klaxon. The powder magazine was listed as a good, well-preserved example of one of the specialised building types developed by Trinity House in association with coastal navigation, and of particular local historical interest as part of the warning system guiding coastal traffic associated with the port of Holyhead.

As such the coastal setting of this high value heritage asset is considered to make a high contribution to the significance of this monument.

As for Caer y Twr (**Section 3.5** above), during the site visit (March 2020) it was not possible to reach the headland due to declining weather conditions and practical/time constraints.

## **4 Stage 3: Evaluate the Potential Impact of Change or Development**

### **4.1 Post-application Consultation (SLVIA)**

As noted above, the assessment of impacts undertaken for the SLVIA and presented in the ES have since been subject to further consultation to further qualify potential visual impacts. Specifically, the post-application consultation undertaken with Trinity House has concluded that, whilst recognising that marine safety is a paramount consideration, the colouring on the structures can be altered and the lighting requirement can be reduced compared with those assumed in the SLVIA. Specifically:

- Colouring can be altered so that only a proportion of each structure is coloured yellow, for example, marking the ends of each of the devices yellow, or a band 5m high on hubs or similar vertically shaped infrastructure. The extent of the yellow marking would depend on the design of the devices and would comprise a 5m band at the ends of each device. The remainder of the devices would be coloured grey, although the exact colour grey would be agreed with NRW and IoACC; and
- Through consultation with Trinity House it has also been possible to reduce the navigation lighting requirements compared with the design envelope assumptions applied in the SLVIA. This would mean that navigational markers and floating devices can use lights that are limited in visibility. On the inshore side of the MDZ the markers can use 2NM lighting – i.e. visible for 2 nautical miles. On the offshore side they would be 5NM lights. In addition, the devices themselves only need to have identification lighting with a visibility of 150 metres.

These post-application amendments to the design are considered below alongside the wire frame representations presented in the ES to allow for an updated and appropriate assessment of impacts to the setting of the selected heritage assets taken forward for more detailed further assessment. Reference is also made to the SLVIA viewpoint assessment results (Appendix 24.3 to the ES), although it is important to note that these were based upon the worst-case scenario (meaning that the scenario that has been assessed is unlikely to reflect the final completed development, i.e. the impact and associated effect will be reduced).

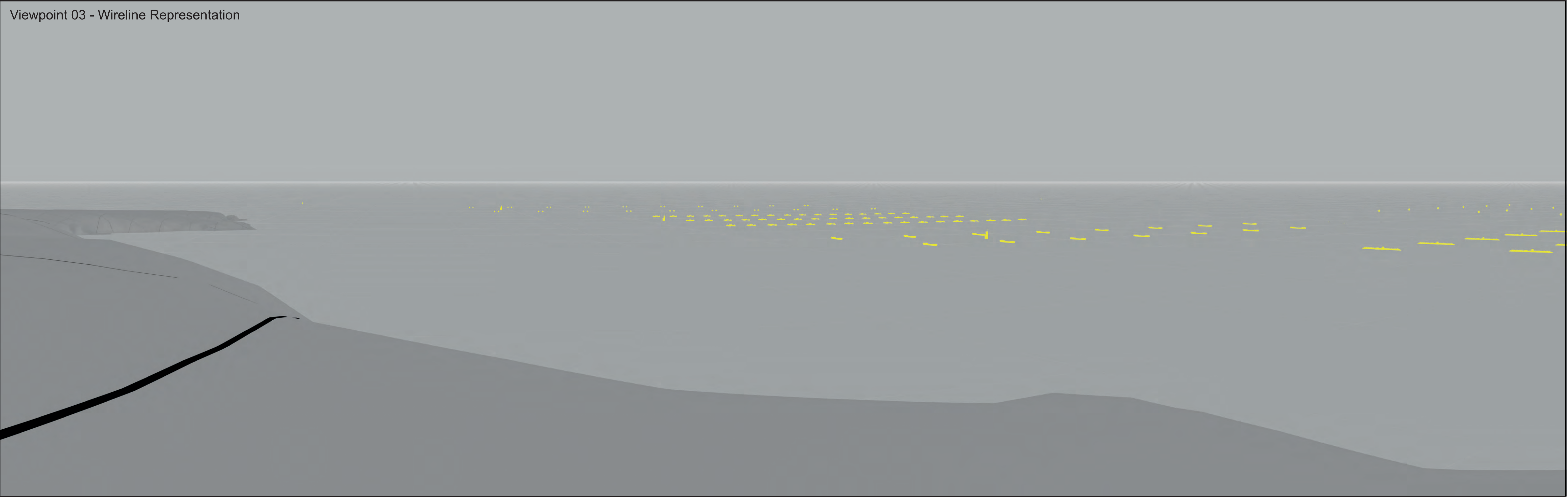
### **4.2 RHDHV1 South Stack Lighthouse group**

The baseline photographs and wireline representations which demonstrate the potential visual impact from the car park at South Stack Lighthouse are shown in Figures 24-3-3a and 24-3-3b included below.

Viewpoint 03 - Baseline Photograph



Viewpoint 03 - Wireline Representation



Viewpoint 03 - Car Park at South Stack Light House

Figure 24-3-3a

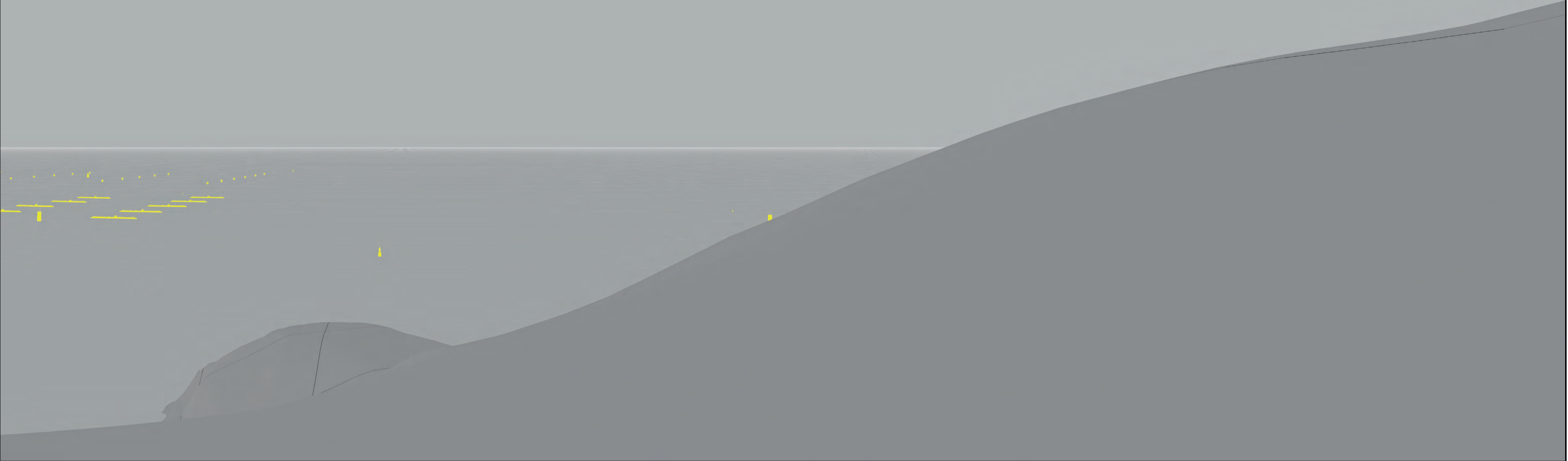


This drawing should be printed at A1 and has a principal/viewing distance of 812.5mm for the 50mm camera lens used in the photography. The illustrated images are presented in cylindrical projection and should be viewed flat, with the eye moved parallel to the image at a set distance. Alternatively a principal/viewing distance of 542mm may be used to illustrate the equivalent of a 75mm lens for the same images. If the drawing is printed at A3 Landscape a principal/viewing distance 406.25mm would be appropriate to match a 50mm camera lens. The horizontal angle of view shown is 90 degrees, and the vertical angle 28.4 degrees is used to allow the full context of the view and proposed development to be represented. Full details of the camera settings and viewpoint location are contained in the SLVIA. This drawing was produced by SLR Consulting Limited.

Viewpoint 03 - Baseline Photograph



Viewpoint 03 - Wireline Representation



Viewpoint 03 - Car Park at South Stack Light House

Figure 24-3-3b



As assessed in the ES, it was the conclusion of the SLVIA that the tidal devices and associated structures would be seen as prominent man-made features in the wider seascape. This would also be applicable at night when the navigation lighting would introduce new elements into a seascape with dark baseline context. The South Stack Lighthouse group is located in the Holyhead Mountain character area (SCA 15) for which it was concluded that there would be significant (in EIA terms) major/moderate (adverse) effect. Similarly, the viewpoint assessment for viewpoint 3 (car park at South Stack Lighthouse) concluded that the overall magnitude of change would be substantial and the effect of major adverse significance.

However, with the reduction in lighting requirements and the alteration of colouring so that the tidal devices would primarily appear grey, thereby matching more appropriately the surrounding seascape, the magnitude of change from a visual perspective will likely be significantly reduced. Together with the recognition that it is the closer internal setting and associations within this group of heritage assets, the coastal setting upon the rocky island and the views towards the lighthouse from the sea which are the fundamental elements to this group's heritage significance in respect to setting, the magnitude of change in terms of heritage setting is also reduced. Rather, views across the sea and towards Ellin's tower are considered to reflect more appropriately the current public appreciation of the site as a visitor attraction within the wider nature reserve (putting this more in the bracket of recreational and visual amenity).

The overall effect upon heritage significance, therefore, is still considered to be of minor to moderate adverse significance in EIA terms.

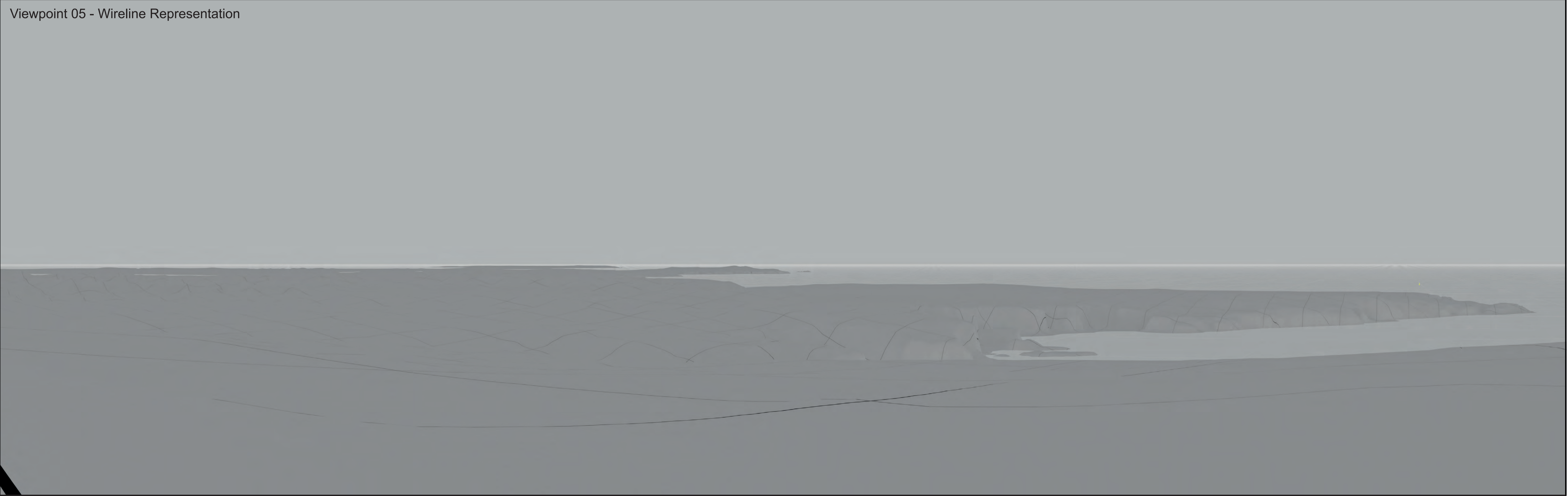
### **4.3 RHDHV8 Holyhead Mountain Hut Circles**

The baseline photographs and wireline representations which demonstrate the potential visual impact from the Holyhead Mountain Hut Circles are shown in Figures 24-3-5a and 24-3-5b included below.

Viewpoint 05 - Baseline Photograph



Viewpoint 05 - Wireline Representation



Viewpoint 05 - Cytau'r Gwyddelod Scheduled Monument

Figure 24-3-5a

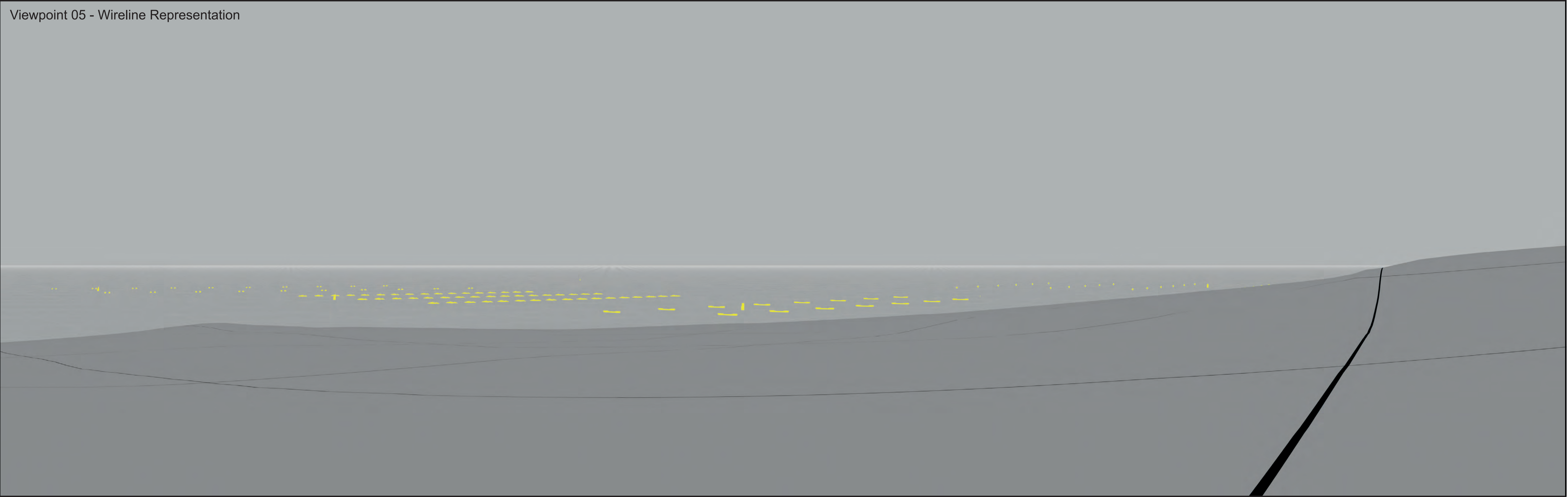


This drawing should be printed at A1 and has a principal/viewing distance of 812.5mm for the 50mm camera lens used in the photography. The illustrated images are presented in cylindrical projection and should be viewed flat, with the eye moved parallel to the image at a set distance. Alternatively a principal/viewing distance of 542mm may be used to illustrate the equivalent of a 75mm lens for the same images. If the drawing is printed at A3 Landscape a principal/viewing distance 406.25mm would be appropriate to match a 50mm camera lens. The horizontal angle of view shown is 90 degrees, and the vertical angle 28.4 degrees is used to allow the full context of the view and proposed development to be represented. Full details of the camera settings and viewpoint location are contained in the SLVIA. This drawing was produced by SLR Consulting Limited.

Viewpoint 05 - Baseline Photograph



Viewpoint 05 - Wireline Representation



Viewpoint 05 - Cyttau'r Gwyddelod Scheduled Monument

Figure 24-3-5b



This drawing should be printed at A1 and has a principal/viewing distance of 812.5mm for the 50mm camera lens used in the photography. The illustrated images are presented in cylindrical projection and should be viewed flat, with the eye moved parallel to the image at a set distance. Alternatively a principal/viewing distance of 542mm may be used to illustrate the equivalent of a 75mm lens for the same images. If the drawing is printed at A3 Landscape a principal/viewing distance 406.25mm would be appropriate to match a 50mm camera lens. The horizontal angle of view shown is 90 degrees, and the vertical angle 28.4 degrees is used to allow the full context of the view and proposed development to be represented. Full details of the camera settings and viewpoint location are contained in the SLVIA. This drawing was produced by SLR Consulting Limited.

These viewpoints show that views to the south will not be affected, although the tidal devices will appear in the view to the west from an elevated position within the boundary of the hut circles. The SLVIA viewpoint assessment concluded that the overall magnitude of change would be medium, resulting in a major/moderate visual impact.

However, as outlined above the further heritage settings assessment undertaken has concluded that views experienced by visitors to the site (hut circle complex) are primarily inward looking to the hut circles themselves and the contribution that setting makes to the significance of the monuments (and complex as a whole) is primarily associated with understanding the monuments within a prehistoric landscape using natural terraces as a defensible location.

This together with the likely reduction in visual impact from the amended design reduces the overall effect upon heritage significance which is, therefore, considered to be minor adverse.

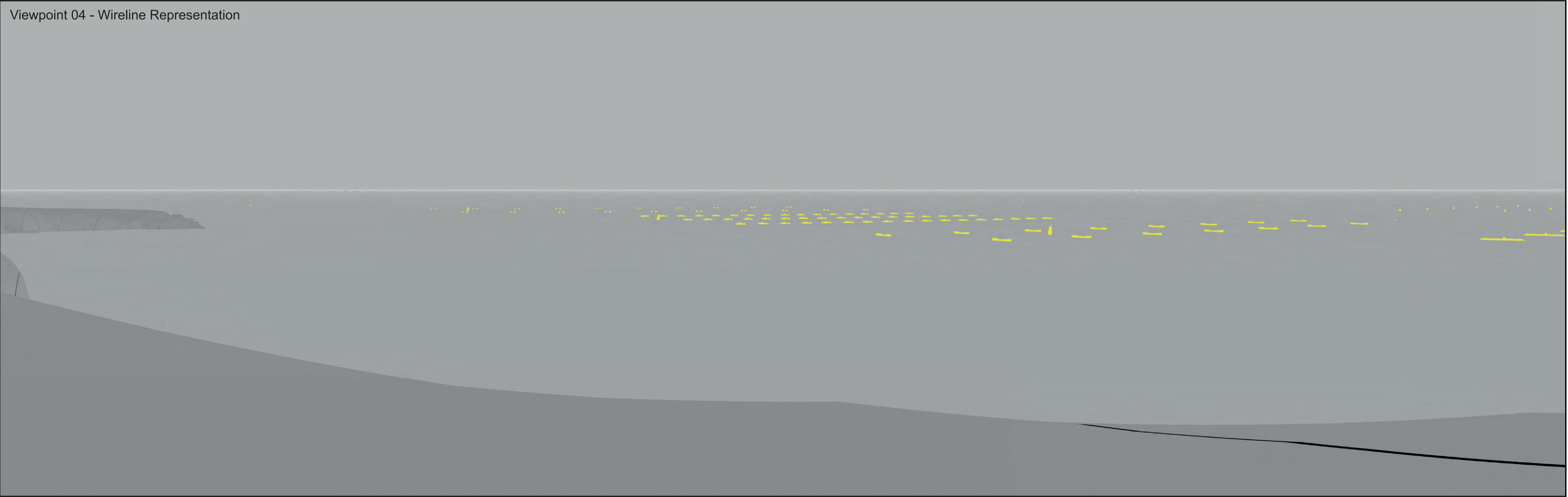
#### **4.4 RHDHV14 Ellin's Tower (Twr Ellin)**

The baseline photographs and wireline representations which demonstrate the potential visual impact from Ellin's Tower are shown in Figures 24-3-4a and 24-3-4b included below.

Viewpoint 04 - Baseline Photograph



Viewpoint 04 - Wireline Representation



Viewpoint 04 - Ellin’s Tower, Near South Stack

Figure 24-3-4a

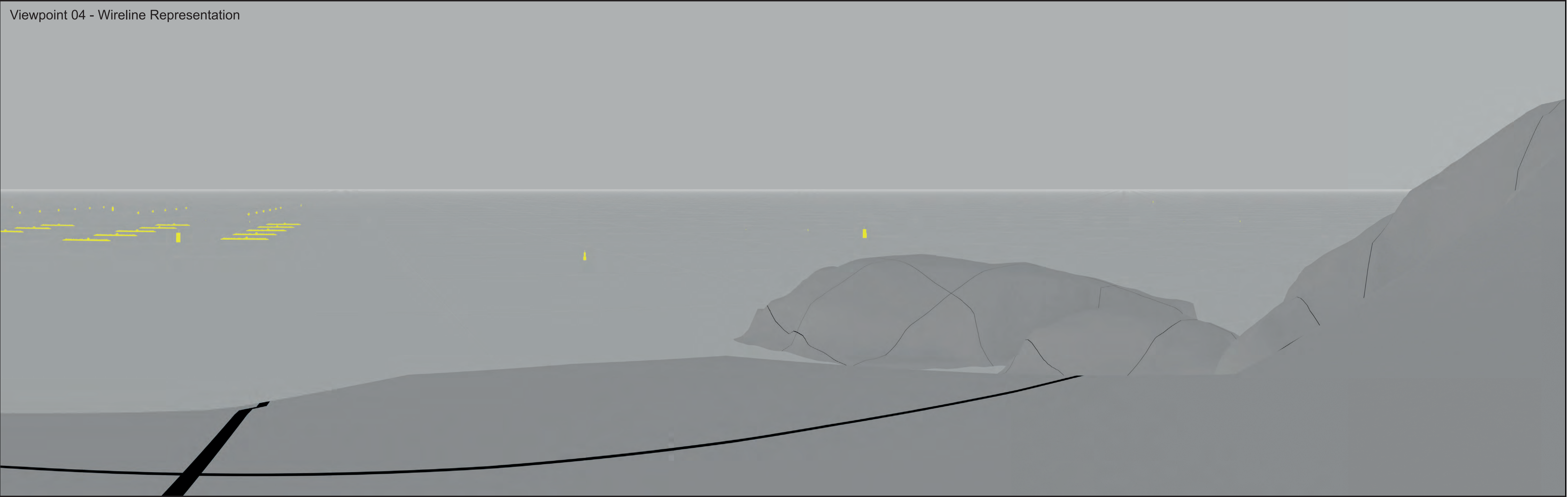


This drawing should be printed at A1 and has a principal/viewing distance of 812.5mm for the 50mm camera lens used in the photography. The illustrated images are presented in cylindrical projection and should be viewed flat, with the eye moved parallel to the image at a set distance. Alternatively a principal/viewing distance of 542mm may be used to illustrate the equivalent of a 75mm lens for the same images. If the drawing is printed at A3 Landscape a principal/viewing distance 406.25mm would be appropriate to match a 50mm camera lens. The horizontal angle of view shown is 90 degrees, and the vertical angle 28.4 degrees is used to allow the full context of the view and proposed development to be represented. Full details of the camera settings and viewpoint location are contained in the SLVIA. This drawing was produced by SLR Consulting Limited.

Viewpoint 04 - Baseline Photograph



Viewpoint 04 - Wireline Representation



Viewpoint 04 - Ellin’s Tower, Near South Stack

Figure 24-3-4b



These viewpoints demonstrate that, as for the South Stack lighthouse group (**Section 4.2** above), the tidal devices and associated structures would be seen as prominent man-made features in the wider seascape. The SLVIA viewpoint assessment for Ellin's tower concludes that overall magnitude of change would be substantial and that the overall visual impact would be major adverse.

As outlined above (**Section 3.3**), it is acknowledged that coastal setting and views across the seascape are important to appreciating the Tower and its significance as a heritage asset. For this reason, even with the likely reduction in visual impact associated with the amendments to the design, the overall effect upon heritage significance will remain as moderate adverse in EIA terms, associated with the effects to the setting of this heritage asset.

#### **4.5 Gogarth Bay round cairn (scheduled monument AN147)**

As stated above (**Section 3.4**), views to the west and towards the Marine Development Zone from the Gogarth Bay round cairn are curtailed by the intervening landscape form of South Stack. This means that only the three electrical hubs will be visible within views to the north from this heritage asset. The magnitude of change to the setting of this heritage asset is, therefore, considered to be negligible, particular with consideration of the reduced lighting requirements and the alterations to the colour to likely reduce the visual impact of the devices offshore.

A viewpoint from Gogarth Bay was not acquired as part of the SLVIA assessment, although the view north is considered to be similar to that presented in Figure 24-3-1b (see **Section 4.6** below).

Overall, therefore, the significance of the impact to the setting of this high value heritage asset from the offshore infrastructure is considered to be of minor adverse significance in EIA terms.

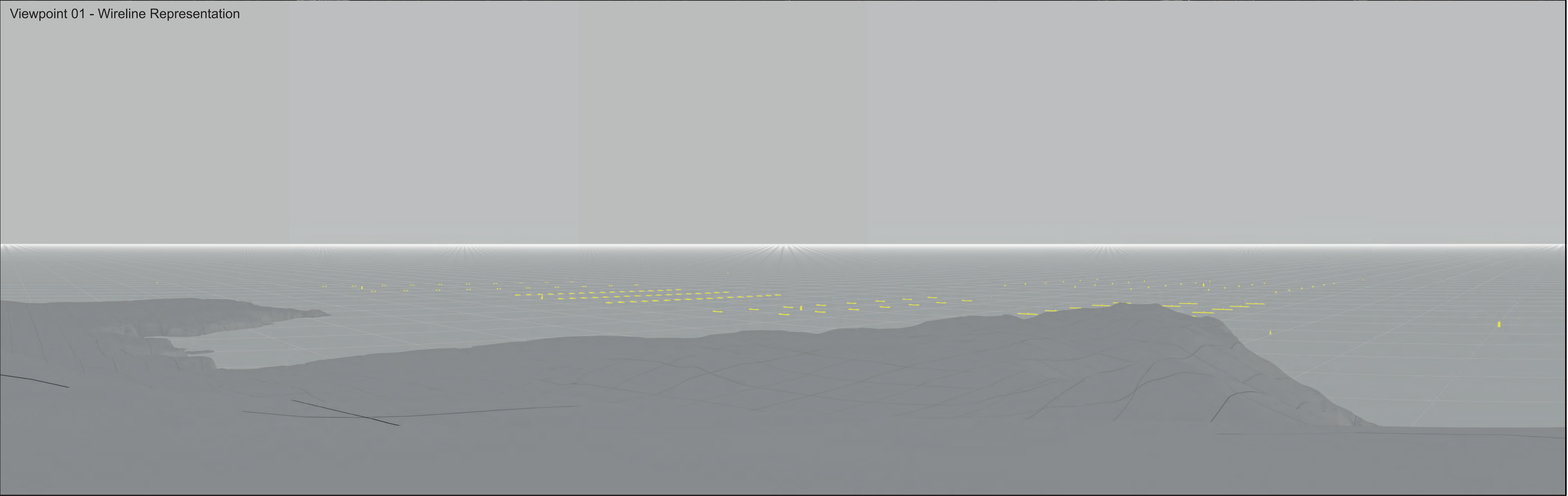
#### **4.6 Caer y Twr (scheduled monument AN019)**

The baseline photographs and wireline representations which demonstrate the potential visual impact from/on Caer y Twr are shown in Figures 24-3-1a and 24-3-1b included below.

Viewpoint 01 - Baseline Photograph



Viewpoint 01 - Wireline Representation



Viewpoint 01 - Summit of Holyhead Mountain

Figure 24-3-1a

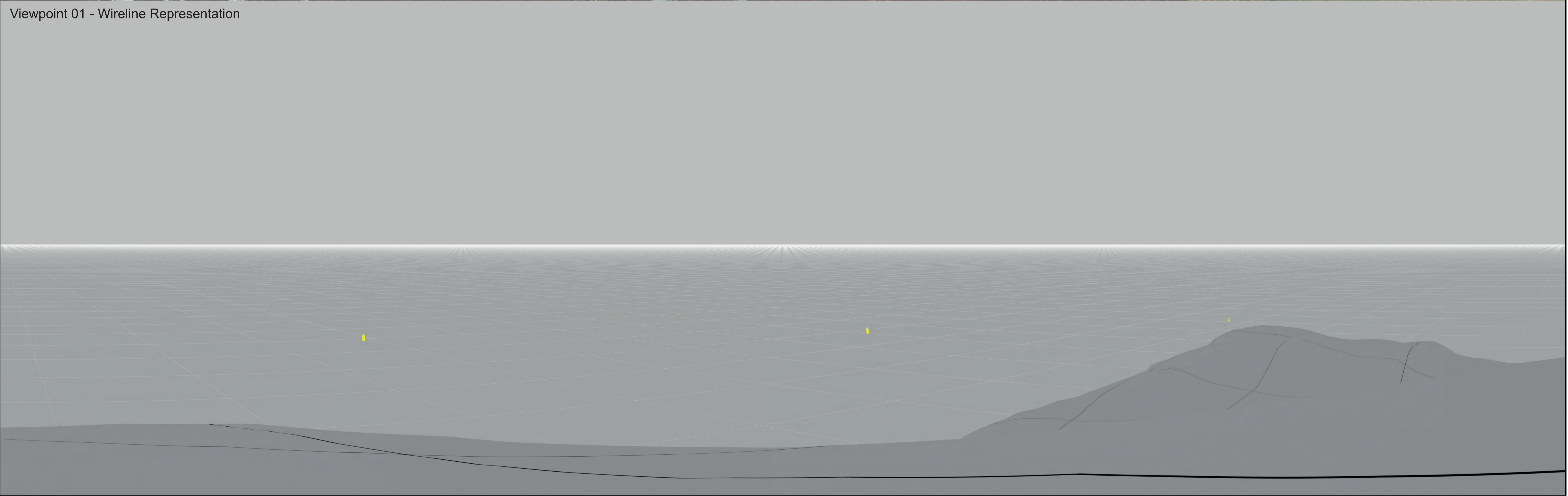


This drawing should be printed at A1 and has a principal/viewing distance of 812.5mm for the 50mm camera lens used in the photography. The illustrated images are presented in cylindrical projection and should be viewed flat, with the eye moved parallel to the image at a set distance. Alternatively a principal/viewing distance of 542mm may be used to illustrate the equivalent of a 75mm lens for the same images. If the drawing is printed at A3 Landscape a principal/viewing distance 406.25mm would be appropriate to match a 50mm camera lens. The horizontal angle of view shown is 90 degrees, and the vertical angle 28.4 degrees is used to allow the full context of the view and proposed development to be represented. Full details of the camera settings and viewpoint location are contained in the SLVIA. This drawing was produced by SLR Consulting Limited.

Viewpoint 01 - Baseline Photograph



Viewpoint 01 - Wireline Representation



Viewpoint 01 - Summit of Holyhead Mountain

Figure 24-3-1b



This drawing should be printed at A1 and has a principal/viewing distance of 812.5mm for the 50mm camera lens used in the photography. The illustrated images are presented in cylindrical projection and should be viewed flat, with the eye moved parallel to the image at a set distance. Alternatively a principal/viewing distance of 542mm may be used to illustrate the equivalent of a 75mm lens for the same images. If the drawing is printed at A3 Landscape a principal/viewing distance 406.25mm would be appropriate to match a 50mm camera lens. The horizontal angle of view shown is 90 degrees, and the vertical angle 28.4 degrees is used to allow the full context of the view and proposed development to be represented. Full details of the camera settings and viewpoint location are contained in the SLVIA. This drawing was produced by SLR Consulting Limited.

The SLVIA viewpoint assessment concluded that the overall magnitude of change from a visual impact perspective would be medium and that the significance of visual impact with respect to the summit of Holyhead Mountain would be of major/moderate adverse significance.

As stated above, views from the hillfort provide a link to the past and demonstrate the relationship between the Iron Age defensive structure and its surrounding agricultural hinterland. However, key views include those towards contemporary monuments such as Plas Meilw hut circles (AN33) rather than necessarily those across the sea to the west. As for the Gogarth Bay round cairn described above (**Section 4.5**), only the three electrical hubs will be visible in the seascape to the north of the scheduled monument with the tidal devices appearing more readily within views to the west as shown in Figure 24-3-1a. However, with the amendments to lighting and to the colour of these devices, and the relatively longer-range distance from the Marine Development Zone, the appearance of the devices in the views will likely be further reduced.

The magnitude of change to the setting (and associated heritage significance) of Caer y Twr from the presence of the tidal devices and associated structures, therefore, is considered to be minor and, therefore, the experience of how the scheduled monument is perceived within its setting by visitors to the site is not anticipated to be significantly affected by the Project.

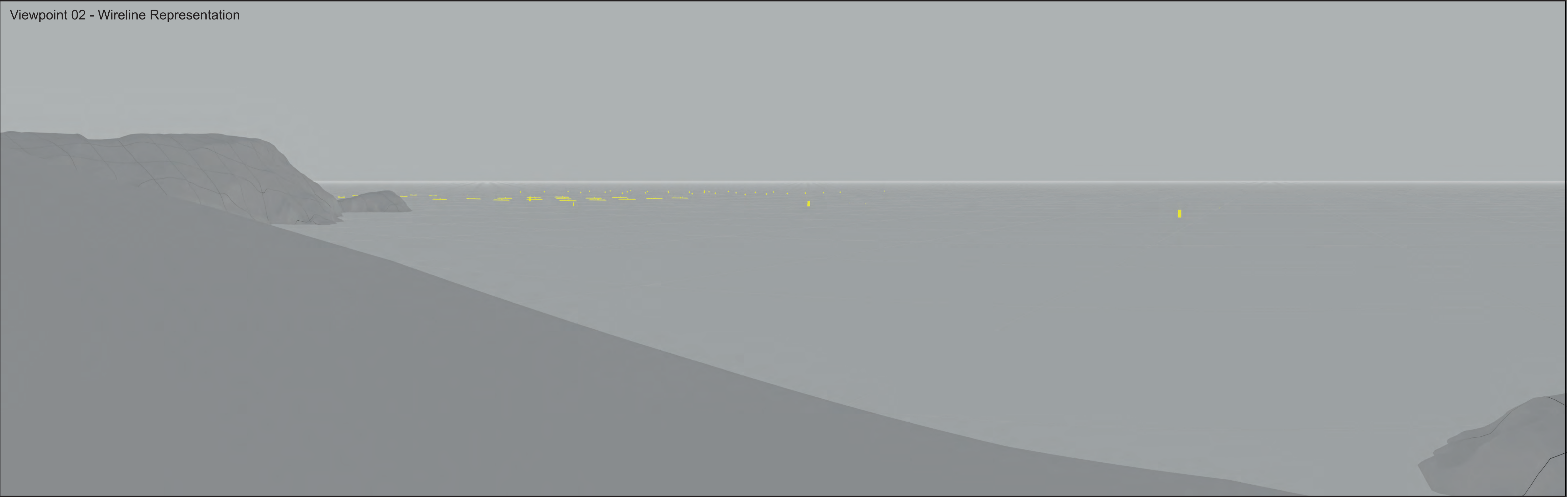
#### **4.7 Former Power Magazine (Grade II Listed Building)**

The baseline photographs and wireline representations which demonstrate the potential visual impact from North Stack are shown in Figures 24-3-2a and 24-3-2b included below.

Viewpoint 02 - Baseline Photograph



Viewpoint 02 - Wireline Representation



Viewpoint 02 - Near Parliament House, North Stack

Figure 24-3-2a



Viewpoint 02 - Baseline Photograph



Viewpoint 02 - Wireline Representation



Viewpoint 02 - Near Parliament House, North Stack

Figure 24-3-2b



This drawing should be printed at A1 and has a principal/viewing distance of 812.5mm for the 50mm camera lens used in the photography. The illustrated images are presented in cylindrical projection and should be viewed flat, with the eye moved parallel to the image at a set distance. Alternatively a principal/viewing distance of 542mm may be used to illustrate the equivalent of a 75mm lens for the same images. If the drawing is printed at A3 Landscape a principal/viewing distance 406.25mm would be appropriate to match a 50mm camera lens. The horizontal angle of view shown is 90 degrees, and the vertical angle 28.4 degrees is used to allow the full context of the view and proposed development to be represented. Full details of the camera settings and viewpoint location are contained in the SLVIA. This drawing was produced by SLR Consulting Limited.

As concluded in the SLVIA viewpoint assessment, the worst-case scenario is not considered to result in a significant impact upon this location with tidal devices only resulting in a medium to slight magnitude of change (in SLVIA terms). With the likely reduction in visual impact from the amendments to the design, coupled with the distance of this location from the Marine Development Zone, impacts to the setting (and associated heritage significance) of the Former Powder Magazine will be negligible, and therefore not significant in EIA terms.

## **5 Stage 4: Consider Options to Mitigate the Impact of a Proposed Change or Development**

As outlined above, measures to reduce the visual impact from the presence of the tidal devices and associated structures have already been discussed and will be incorporated into the revised design as a result of post-application consultation with Trinity House regarding requirements to ensure marine safety as a paramount concern. Further to this, it is anticipated that any tidal devices to be installed in the northern area or within 1km of the shore will be subject to a Marine Licence condition controlling the visible elements by NRW and in consultation with IACC and heritage stakeholders as required.

## **6 Summary and Conclusion**

The aim of this supplementary note has been to provide additional clarity on the assessment of the impact of the offshore infrastructure upon the setting and associated heritage significance of specifically identified onshore (coastal) heritage assets in line with the staged assessment as set out in the Cadw guidance on assessing the setting of heritage assets. Following Stage 1, six heritage assets were identified for further Stage 2 and Stage 3 assessment:

- RHDHV1 South Stack Lighthouse group (all Grade II Listed Buildings);
- RHDHV8 Holyhead Mountain Hut Circles (scheduled monument AN16);
- RHDHV14 Ellin's Tower (Twr Ellin) (Grade II Listed Building);
- Gogarth Bay round cairn (scheduled monument AN147);
- Caer y Twr (scheduled monument AN019); and
- Former Power Magazine (Grade II Listed Building).

On undertaking this assessment, account has been taken of representations made by IoACC and GAPS to the draft order made by Menter Môn Morlais Ltd. (under the Transport and Works Act Order - TWAO - 1992) for the Morlais Demonstration Zone and of post-application amendments to the design following further consultation by Menter Môn Morlais Ltd. on marine safety requirements with Trinity House.

The results of the further assessment demonstrate that, whilst the setting (and associated heritage significance) of the South Stack lighthouse group and Ellin's Tower will be subject to potentially moderate adverse effects from the Project, the impacts and associated effects to heritage significance (as a result of change in setting) of all remaining heritage assets subject to further assessment in this supplementary note are not considered to be significant in EIA terms (i.e. would be of minor adverse significance and below).