

Penrhos Leisure Village Holyhead, Anglesey

Technical Advice Note



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

Penrhos Leisure Village Holyhead, Angelsey

Technical Advice Note

Project No. 2163

Prepared for: Land and Lakes Ltd.

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Report No.971

Cyhoeddwyd gan Ymddiriedolaeth Archaeolegol
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Published by Gwynedd Archaeological Trust
Gwynedd Archaeological Trust
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Bangor, Gwynedd, LL57 2RT

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Mae Ymddiriedolaeth Archaeolegol Gwynedd yn Gwmni Cyfyngedig (Ref Cof. 1180515) ac yn Elusen (Rhif Cof. 508849)
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G2163 PENRHOS LEISURE VILLAGE
TECHNICAL ADVICE NOTE (TAN) DEVELOPMENT AND ARCHAEOLOGY

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G2163 PENRHOS LEISURE VILLAGE TECHNICAL ADVICE NOTE (TAN) DEVELOPMENT AND ARCHAEOLOGY

1.0 Introduction

This planning advice note should be read in conjunction with Planning Policy Wales, 2002. Planning Policy Wales (PPW) and technical advice notes and circulars should be taken into account by local planning authorities in Wales in the preparation of development plans. They may be material to decisions on individual planning applications and will be taken into account by the Welsh Government and Inspectors in the determination of appeals and called-in planning applications.

This TAN provides technical guidance which supplements the policy set out in Planning Policy Wales in relation to development and archaeology. It advises on development and archaeology as this relates to sustainability principles (section 2.2 PPW), and provides a framework within which risks arising from development on archaeological remains can be assessed.

2.0 Background

The site is located in Penrhos on the Isle of Anglesey and is split into three key areas, as shown on figure 1 to 5, which are referred to as Kingsland, Penrhos and Cae Glas. The site is located within the Ynys Mon/Anglesey Area of Outstanding Natural Beauty. The site and surrounding area is also home to several Scheduled Ancient Monuments and a SSSI is located along the coastal zone adjacent to the site.

Single Outline Application for the three sites:

Kingsland Residential Development

The first phase of the development is for a 375 unit residential development.

Penrhos Leisure Village

The majority of the developable area will be used to deliver a leisure village of c.500 lodges, restaurants, a central hub, small retail units, bars, cafés, sports and leisure facilities, coastal park, spa, conversion of existing farm buildings for hotel accommodation, an education centre, a multi use games area, car parking and a gate house.

The focus of the development will be enjoyment of the natural and historic environment. It is therefore of key importance that the development becomes integrated into the existing woodland and natural areas rather than being seen as replacing them.

Cae Glas Nature Village

The Cae Glas Nature Village will be of lower density than the Penrhos development and will comprise 312 lodges, a 120-room hotel, and car parking. The area to the east of the Cae Glas Nature Village is currently inaccessible to the public. It is proposed to open this area up to the public for limited and carefully managed use for an outdoor learning resource with a limited number of lodges set into the landscape coupled with a visitor / education centre. New football and cricket pitches will be provided to the south of the leisure village area.

Temporary Uses

It should be noted that although the eventual use of both 'Village' areas is leisure, there is an intention to use the facilities at the Cae Glas site for the first few years of operation as accommodation for construction workers and engineers working on the build of the New Wylfa Nuclear Power Station, should the development go ahead. Therefore both uses will need to be assessed as necessary as part of the planning application through supporting technical studies.

Proposed stages of work

Proposed stages of work	Planning Stage
Archaeological desk based assessment	Pre-planning
Geophysical investigation	Pre-planning
Historic Landscape Characterisation Assessment (HLCA)	Pre-planning
Evaluation trenching	Pre-planning
Environmental Statement: Archaeology Chapter	Pre-planning
Penrhos Conservation Management Plan (CMP)	Post-planning
Further evaluation trenching	Post-planning
Archaeological Mitigation	Post-planning

3.0 TAN aims

The general approach of PPW, supported by the TAN, is to advise caution in respect of new development in areas with actual or suspected archaeological remains and heritage assets by setting out a precautionary framework to guide planning decisions. The overarching aim of the precautionary framework is, in order of preference, to:-

- Where possible direct new development away from those areas where archaeological remains and heritage assets exist or are suspected to exist.
- Provide advice on the potential risk and opportunities from known and unknown archaeological remains and heritage assets.
- Provide information on a programme of evaluation works in order to better understand and manage that risk.
- Provide advice on potential mitigatory measures, where appropriate.

4.0 Methodology

Gwynedd Archaeological Trust (GAT) the appointed archaeological contractor has carried out an archaeological desk based assessment of the three proposed development areas. The aims of the assessment were as follows:

- to identify and record the cultural, built, and archaeological heritage of the areas to be affected;
- to evaluate the importance of what was identified (both as a cultural landscape and as the individual items which make up that landscape); and
- to recommend ways in which damage to the cultural, built, and archaeological heritage can be avoided or minimised or ways in which the heritage assets can benefit from the proposed development.

A full archaeological desk based assessment usually comprises 6 phases:

- 1) Desk-top study
- 2) Field Search
- 3) Interim Draft Report
- 4) Detailed Field Evaluation
- 5) Final Draft Report
- 6) Final Report

The assessment carried out covered the work required under 1, 2 and 3. It is sometimes necessary to undertake a programme of field evaluation following the desktop assessment. This is because some sites cannot be assessed by desktop or field visit alone, and additional fieldwork is required. This typically takes the form of geophysical survey and/or trial excavation, though other options, including topographic survey, are also possible.

4.1 Desk-top Study

This involved consultation of maps, computer records, written records and reference works, which make up the Historic Environment Record (HER), located at Gwynedd Archaeological Trust, Bangor. A range of aerial photographs were examined at National Monuments Record, Aberystwyth dating from the 1940's and 1960's, as well as more recent colour aerial coverage. Estate maps, tithe maps and OS maps were examined at the University of Wales Bangor archives and the National Library of Wales, Aberystwyth. The local area record office at Llangefni was closed for refurbishment at the time that the report was being compiled, but it is not thought that much significant archaeological archaeology has been missed. Information about Listed Buildings, Scheduled Ancient Monuments, and other statutory and non-statutory designations was obtained from Cadw.

Secondary sources were consulted to provide background information, particularly on the development of the town and harbour of Holyhead. A programme of archaeological excavation has recently been undertaken to the east of the study area, at Ty Mawr and Trefignath, and also prior to the construction of the A55 dual carriageway. Both these programmes of work confirmed the dense distribution of buried archaeological remains within the area.

4.2 Field Search

The field search was undertaken on the 7th and 8th December, 2010, when the Kingsland site was visited by an archaeologist. The Penrhos and Cae Glas areas were visited on 3rd August 2011 by two archaeologists.

The conditions were fine for a field search, although cloud and drizzle masked far reaching views. Parts of the Cae Glas site were covered in tall, dense vegetation and were thus inaccessible. These areas, however, were largely confined to an area previously utilised for landfill and the likelihood of preservation of archaeological features in this area is considered negligible.

4.3 Report

All available information was collated, and the features were then assessed and allocated to categories of importance ranked from International (Very High) through to National (High), Regional/ County (Medium), Local (Low) and None as listed in Tables 1, 2, and 3. If it was not possible to assess the importance of the site from the visible remains, then it was ranked Unknown. These are intended to give an idea of the importance of the feature and the level of response likely to be required; descriptions of the features and specific recommendations for further assessment or mitigatory measures, as appropriate, are given in the relevant sections of this report. The criteria used for allocating features to categories of importance are based on those used by the Secretary of State when considering ancient monuments for scheduling; these are set out in the Welsh Office Circular 60/96 and 61/96. This part of the report has been prepared in accordance with the standards and guidance issued by the Institute for Archaeologists', the requirements of the Environmental Impact Assessment regulations, and Section 12 of the National Planning Policy Framework entitled *Conserving and enhancing the historic environment*.

Recommendations are given where possible, but if the site is ranked 'Unknown' then further assessment would be required so that the correct status of the site can be determined. The criteria for assessing importance are set out in [appendix II](#).

Each feature identified has also been attributed a magnitude of impact level, which is ranked from High through to Medium, Low, and Negligible/Neutral. These impacts can be direct or indirect, as well as being adverse or beneficial. The criteria for assessing magnitude of impact are set out in [appendix II](#).

For each feature a significance of effect level has been attributed. This level is determined by the importance of the heritage asset and the assigned level of impact. The criteria for assessing significance of effect are set out in [appendix II](#).

5.0 Summary of results

This section will list the findings of the archaeological desk based assessment, as well as the expected impact of the development upon heritage assets and recommendations if applicable. The proposed recommendations were determined by the nature and importance of the site and the proposed impact. If there is to be no impact, then no work would be required. Further discussion of mitigation is provided below.

5.1 Kingsland (Area 1)

The following sites have been identified within this area:

Table 1

Number	Name	Importance	Impact	Significance of Effect	Recommendations
1	Bodwredd Farmhouse	Local	Neutral	Neutral	None
2	Site of former Bodwredd Farmhouse	Unknown	Neutral	Neutral	None
3	Site of former building	Unknown	Neutral	Neutral	None
4	Site of Ty'n y Coed cottage	Unknown	Neutral	Neutral	None
5	Site of Cae'r Ty Hen Farmhouse	Unknown	Neutral	Neutral	None

5.2 Cae Glas

The following sites have been identified within this area:

Table 2

Number	Name	Importance	Impact	Significance of Effect	Recommendations
7	Trefignath Farm	Unknown	High Adverse	Unknown	Trial excavation
8	Trefignath Burial Chamber Scheduled Ancient Monument (SAM)	National	Low Adverse	Minor Adverse	Avoidance Essential, Statutorily Protected as a SAM. Every effort should be made to avoid excessive visual intrusion. It must be possible to appreciate the monument in its landscape setting.
9	Tyddyn Bach	Unknown	Neutral	Neutral	None
10	Tidal Mill at Felin-Heli	Regional	Neutral	Neutral	None
11	Tre-Daniel	Unknown	Neutral	Neutral	None
12	Cae Glas Farm	Local	Neutral	Neutral	None
13	Tre'r Gof Farm	Regional	Moderate Adverse	Minor/Moderate Adverse	Building record and excavation.
14	Treaddur Burial Chamber	Regional	Low Adverse	Low Adverse	Avoidance Every effort should be made to avoid any disturbance to this monument.
33	Roman coin hoard findspot, Trearddir	Unknown	Neutral	Neutral	None
34	Pillbox	Regional	Neutral	Neutral	None
35	Pillbox	Regional	Neutral	Neutral	None
36	Pillbox	Regional	Neutral	Neutral	None

5.3 Penrhos

The following sites have been identified within this area:

Table 3

Number	Name	Importance	Impact	Significance of Effect	Recommendations
6	Stanley Gate Tollhouse Grade II Listed	Regional	Neutral	Neutral	None

	Building				
15	Penrhos Bailiff's Tower and Home Farm Grade II Listed Building	Regional	Low Adverse	Minor Adverse	Listed Building consent; building record prior to alteration
16	Penrhos Betting Stand Grade II Listed Building	Regional	Low Beneficial	Minor Beneficial	Listed Building consent; building record prior to alteration
17	Penrhos Candle Tower and walls adjoining remains of Penrhos House Grade II Listed Building	Regional	High Beneficial	Moderate Beneficial	Listed Building consent; building record prior to alteration
18	Penrhos Water tower Grade II Listed Building	Regional	Medium Beneficial	Minor/Moderate Beneficial	Listed Building consent; building record prior to alteration
19	Penrhos Garden	Regional	Neutral to Slight Adverse	Negligible to Minor Adverse	Conservation Management Plan
20	Footprint of Penrhos House	Unknown	Unknown	Unknown	Inspection after vegetation removal
21	The Tower, Dairy, Laundry and Gunroom Penrhos, Grade II Listed Building	Regional	High Beneficial	Moderate Beneficial	Listed Building consent; building record prior to alteration
22	The Battery Grade II Listed Building	National	Medium to High Beneficial	Moderate to Major Beneficial	Historic building record prior to alteration
23	Prehistoric standing stone	Unknown	Neutral	Neutral	None
24	Flint finds, Penrhos Bay	Unknown	Neutral	Neutral	None
25	Boathouse	Regional	Low Adverse	Minor Adverse	Historic building record prior to alteration
26	Bathing house	Local	Low Beneficial	Negligible	Historic building record prior to alteration
27	Fish weir	Regional	Neutral	Neutral	None
28	Fish weir	Local	Neutral	Neutral	None
29	Fish weir	Regional	Neutral	Neutral	None
30	Beddmanarch	Local	Neutral	Neutral	None

31	Roman coin hoard findspot, Penrhos	Unknown	Neutral	Neutral	None
32	Penrhos Lodge, Penrhos	Regional	Neutral	Neutral	None

6.0 Conclusions and further works

Recommendations for further evaluation and mitigation are derived from the significance, or potential significance, of the heritage assets and the proposed impact. Where the significance of a site is not understood then further evaluation work is recommended. A programme of field evaluation is also recommended for all presently undeveloped areas on which there is going to be direct impact.

6.1 Field Evaluation

The definition of archaeological field evaluation is:

‘a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate.’ *IFA Standard and Guidance for Field Evaluation*, 1994, revised October 2008.

It has been established above that there is potential for the survival of buried archaeology within areas of proposed development, and a programme of archaeological evaluation is therefore necessary. This needs to be targeted at areas of proposed impact. This should be a staged process, which will include use of a number of techniques. The following list is derived from the IFA guidelines, and includes non-destructive and destructive techniques.

a) Non-destructive

- geophysical survey
- remote sensing
- geochemical survey
- earthwork survey
- field scanning (i.e. observation and mapping of artefact and other distributions, but not collection of artefacts)
- standard building survey

b) Destructive Methods (of varying destructive potential)

- augering
- hand-excavated test pits
- hand-excavated trenches
- machine-stripped and manually excavated test pits
- machine-stripped and manually excavated trenches
- probing (frequently used underwater)
- surface artefact collection: fieldwalking for collection as opposed to scanning

Magnetometer survey is a non-invasive form of geophysical survey which is capable of surveying large areas of land relatively quickly and identifying the presence of buried features. It does not work in all areas, and is less suitable where rock is close to the surface. Nonetheless, magnetometer survey should be considered as one of the principal techniques

to be used within the evaluation process at Penrhos. Other forms of geophysical survey which might be relevant include resistivity survey and radar.

In order to confirm the results of the magnetometer survey and to investigate known sites it is necessary to carry out invasive or destructive methods of evaluation. Trial excavation involves the controlled excavation of test pits or trial trenches either over features identified during earlier stages of archaeological assessment or within areas of unknown archaeological potential. Field evaluation is also required wherever there is likely to be ground disturbance, including landscaping and planting. This technique is capable of locating and assessing the nature and importance of buried archaeological features, and is usually carried out pre-planning application.

Other invasive techniques which might be considered include strip, map and sample, where much larger areas are stripped and evaluated in advance of development. This technique is particularly successful at locating sites which consist of dispersed features, and which are therefore difficult to identify in trial trenches. It is usually undertaken following the identification of areas of high archaeological potential by geophysical survey or trial trenching, and at the mitigation stage.

Wherever possible below-ground impact should be minimised. Areas where such impact cannot be avoided should be evaluated early on in the process, so that the risk of encountering significant archaeological sites can be better assessed. If significant below ground archaeology is found, then the opportunity for changing the layout or design should be examined so as to avoid large-scale archaeological excavation. This might include designs which do not require below-ground disturbance, or moving part of the development to areas where evaluation has identified little or no archaeology.

6.2 Mitigation

The mitigation options primarily rely on either avoiding direct impact or fully investigating and recording the archaeology prior to impact, so that the site is preserved by record. Preservation *in situ* / mitigation by avoidance needs to consider the long term preservation of below ground deposits with the potential impact of land-use alteration, hydrology, and nearby development all being considered. The opportunities for incorporating historic buildings and archaeological remains into the development should be examined. This would both secure their future and provide cultural depth and historic interest within the development. This should certainly apply to all listed buildings, but also to many of the other structures. For example an increasing interest in Second World War archaeology may provide an opportunity for imaginative re-use of the three pill-boxes within the Cae Glas development area.

If 'new' archaeological sites are discovered during field evaluation a decision will have to be made on their appropriate mitigation. This will involve either protection and preservation *in situ*, or excavation and recording in advance of destruction.

If buildings of historical importance (including those that are not currently Listed) and/or their settings are to be impacted upon, even if the impact is beneficial, a building record commensurate with the importance of the building should be undertaken prior to alteration. This would ensure preservation through a time-stamped record of the building and its setting as it currently exists. The level of building record required is dependent upon the importance of the building and the level of impact/ significance of effect from the proposed development. The level of record should be decided upon discussions with the Gwynedd Archaeological Planning Service (GAPS), Ynys Mon Planning department, and the local conservation officer. All Listed Buildings to be impacted upon will require Listed Building consent prior to development.

6.3 Conclusions

This initial assessment has identified an area rich in history and archaeology. A wealth of sites from the Neolithic to the Second World War survive, including significant remains of the Penrhos estate. In addition the assessment has identified high potential for the discovery of buried archaeology.

Cadw have published guidelines for the sustainable management of the historic environment in Wales which allow for the integration of new development with existing historic assets, and there is clear potential for such an approach in this development.¹ This would require a sound understanding of the nature and status of the historic assets and proposals for their management. This is best provided in the form of a Conservation Management Plan, which the developer has committed to providing at the detailed design stage. Such an approach would identify the historic environment as a positive asset to the development by providing cultural and historic depth to new development. Opportunities for active engagement with the historic environment by visitors and/or the community as part of the development need to be explored. Such an approach might see the continued exploration and research of the historic environment as an opportunity for research and excavation, and the integration of academic style courses or training schemes inter-mingled with leisure activities.

The identification of significant below-ground archaeology is a risk that needs to be carefully managed. This is best controlled by careful liaison between the designers of the scheme and the archaeologists so that areas of direct impact are minimised, identified and evaluated, and the scheme kept sufficiently flexible so that the requirement for any large-scale archaeological excavations is either avoided or carefully controlled and incorporated into the project timetable.

¹ Cadw 2011

APPENDIX I: DEFINITIONS OF IMPORTANCE AND RECOMMENDATION

1. Definition of Categories of importance

The following categories were used to define the importance of the archaeological resource:

Significance	Description
International (Very High)	Archaeological sites or monuments of international importance, including World Heritage Sites. Structures and buildings inscribed as of universal importance as World Heritage Sites. Other buildings or structures of recognised international importance.
National (High)	Ancient monuments scheduled under the Ancient Monuments and Archaeological Areas Act 1979, or archaeological sites and remains of comparable quality, assessed with reference to the Secretary of State's non-statutory criteria. Listed Buildings. Undesignated structures of national importance.
Regional/ County (Medium)	Conservation Areas Archaeological sites and remains which, while not of national importance, score well against most of the Secretary of State's criteria.
Local (Low)	Archaeological sites that score less well against the Secretary of State's criteria. Historic buildings on a 'local list'.
None	Areas in which investigative techniques have produced no or only minimal evidence for archaeological remains, or where previous large-scale disturbance or removal of deposits can be demonstrated.
Unknown	Sites whose historic significance can only be determined by further work.

2. Definition of Impact

The direct impact of the proposed development on each site was estimated. The impact is defined as neutral, low, medium, high or unknown as follows:

Magnitude	Direct Impact	Indirect Impact
High Adverse	Complete removal of an archaeological site. Complete destruction of a designated building or structure.	Radical transformation of the setting of an archaeological monument. A fundamental change in the setting of a building.
Medium Adverse	Removal of a major part of an archaeological site and loss of research potential. Extensive alteration (but not demolition) of a historic building or feature, resulting in an appreciable adverse change.	Partial transformation of the setting of an archaeological site (e.g. the introduction of significant noise or vibration levels to an archaeological monument leading to changes to amenity use, accessibility or appreciation of an archaeological site). Partial adverse transformation of the setting of a designated building.
Low Adverse	Removal of an archaeological site where a minor part of its total area	Minor change to the setting of an archaeological monument or historic

	is removed but the site retains a significant future research potential. Change to a historic building or feature resulting in a small change in the resource and its historical context and setting.	building.
Negligible/Neutral	No impact from changes in use, amenity or access. No change in the ability to understand and appreciate the resource and its historical context and setting.	No perceptible change in the setting of a building or feature.
Low Beneficial	Land use change resulting in improved conditions for the protection of archaeological remains or understanding/appreciation of a historic building or place	Decrease in visual or noise intrusion on the setting of a building, archaeological site or monument. Improvement of the wider landscape setting of a building, archaeological site or monument.
Medium Beneficial	Land use change resulting in improved conditions for the protection of archaeological remains, or understanding/appreciation of a historic building or place, including through interpretation measures (heritage trails, etc). Removal of harmful alterations to better reveal the significance of a building or structure, with no loss of significant fabric.	Significant reduction or removal of visual or noise intrusion on the setting of a building, archaeological site or monument; and Improvement of the wider landscape setting of a building, archaeological site or monument Improvement of the cultural heritage amenity, access or use of a building, archaeological site or monument.
High Beneficial	Arrest of physical damage or decay to a building or structure;	Exceptional enhancement of a building or archaeological site, its cultural heritage amenity and access or use

3. Definition of Significance of Effect

The significance of the impact of the Overall Development on archaeological remains and built heritage is determined by:

- the importance of the asset; and
- the magnitude of impact to the asset.

Magnitude of Impact	Negligible/Neutral	Low	Medium	High
International Importance	Negligible	Moderate	Moderate/Major	Major
National Importance	Negligible	Minor	Moderate/Major	Major
Regional/County Importance	Negligible	Minor	Minor/Moderate	Moderate
Local Importance	Negligible	Negligible	Minor	Minor/Moderate
No importance	Negligible	Negligible	Negligible	Negligible

4. Definition of field evaluation techniques

Field evaluation is necessary to allow the reclassification of the unknown sites, and to allow the evaluation of areas of land where there are no visible features, but for which there is

potential for sites to exist. Two principal techniques can be used for carrying out the evaluation: geophysical survey and trial trenching.

Geophysical survey

This technique involves the use of a magnetometer, which detects variation in the earth's magnetic field caused by the presence of iron in the soil. This is usually in the form of weakly magnetised iron oxides, which tend to be concentrated in the topsoil. Features cut into the subsoil and back-filled or silted with topsoil contain greater amounts of iron and can therefore be detected with the gradiometer. Strong readings can be produced by the presence of iron objects, and also hearths or kilns.

Other forms of geophysical survey are available, of which resistivity survey is the other most commonly used. However, for rapid coverage of large areas, the magnetometer is usually considered the most cost-effective method. It is also possible to scan a large area very rapidly by walking with the magnetometer, and marking the location of any high or low readings, but not actually logging the readings for processing.

Trial trenching

Buried archaeological deposits cannot always be detected from the surface, even with geophysics, and trial trenching allows a representative sample of the development area to be investigated. Trenches of an appropriate size can also be excavated to evaluate category E sites. These trenches typically measure between 20m and 30m long by 2m wide. The turf and topsoil is removed by mechanical excavator, and the resulting surface cleaned by hand and examined for features. Anything noted is further examined, so that the nature of any remains can be understood, and mitigation measures can be recommended.

5. Definition of Mitigatory Recommendations

None:

No impact so no requirement for mitigatory measures.

Detailed recording:

Requiring a photographic record, surveying and the production of a measure drawing prior to commencement of works.

Archaeological excavation may also be required depending on the particular feature and the extent and effect of the impact.

Basic recording:

Requiring a photographic record and full description prior to commencement of works.

Watching brief:

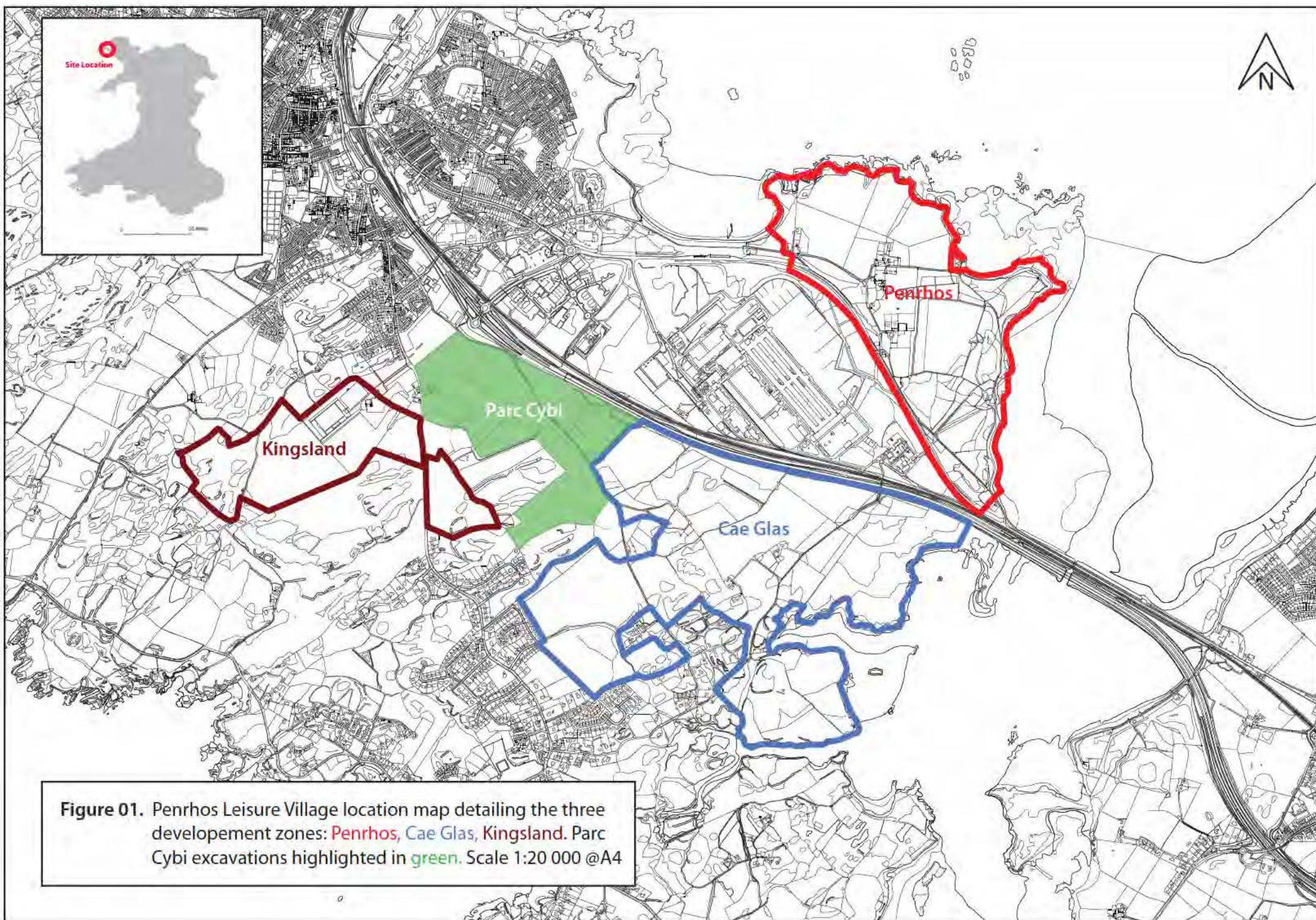
Requiring observation of particular identified features or areas during works in their vicinity. This may be supplemented by detailed or basic recording of exposed layers or structures.

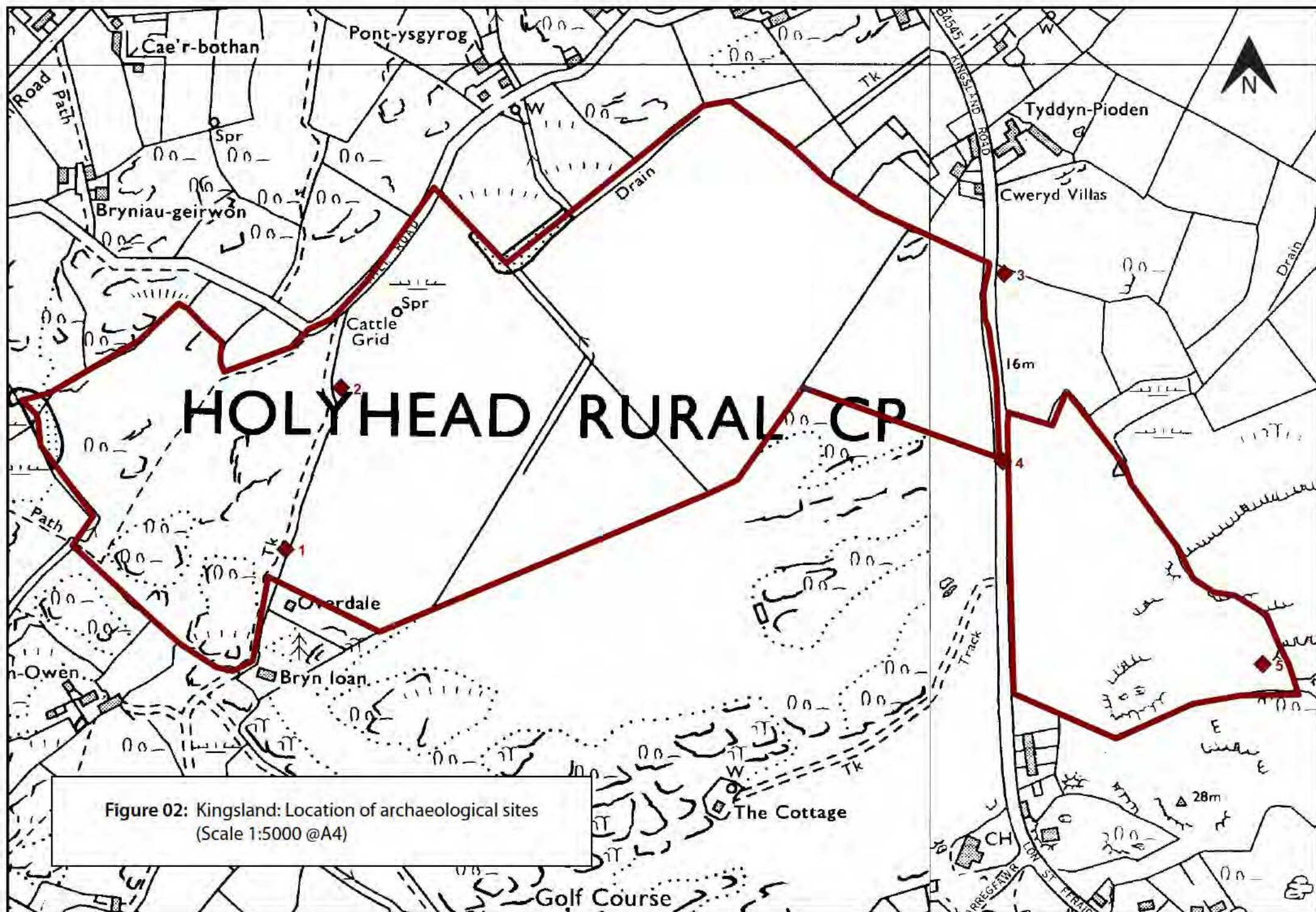
Avoidance or preserve *in situ*:

Features, which may be affected directly by the scheme, or during the construction, should be avoided or preserved *in situ* and incorporated into the scheme. Occasionally a minor change to the proposed plan is recommended, but more usually it refers to the need for care to be taken during construction to avoid accidental damage to a feature. This is often best achieved by clearly marking features prior to the start of work.

Reinstatement:

The feature should be re-instated with archaeological advice and supervision.





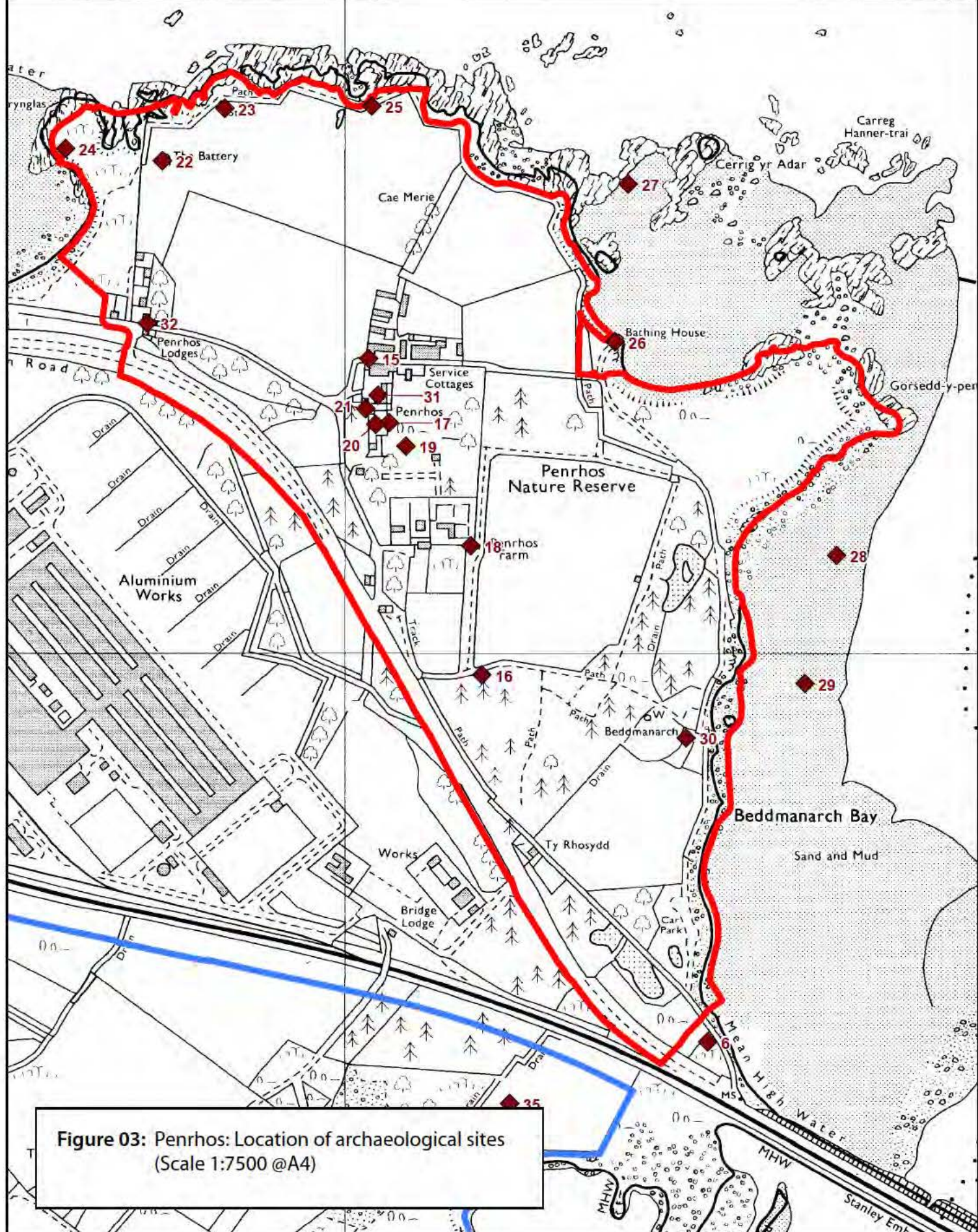


Figure 03: Penrhos: Location of archaeological sites
(Scale 1:7500 @A4)

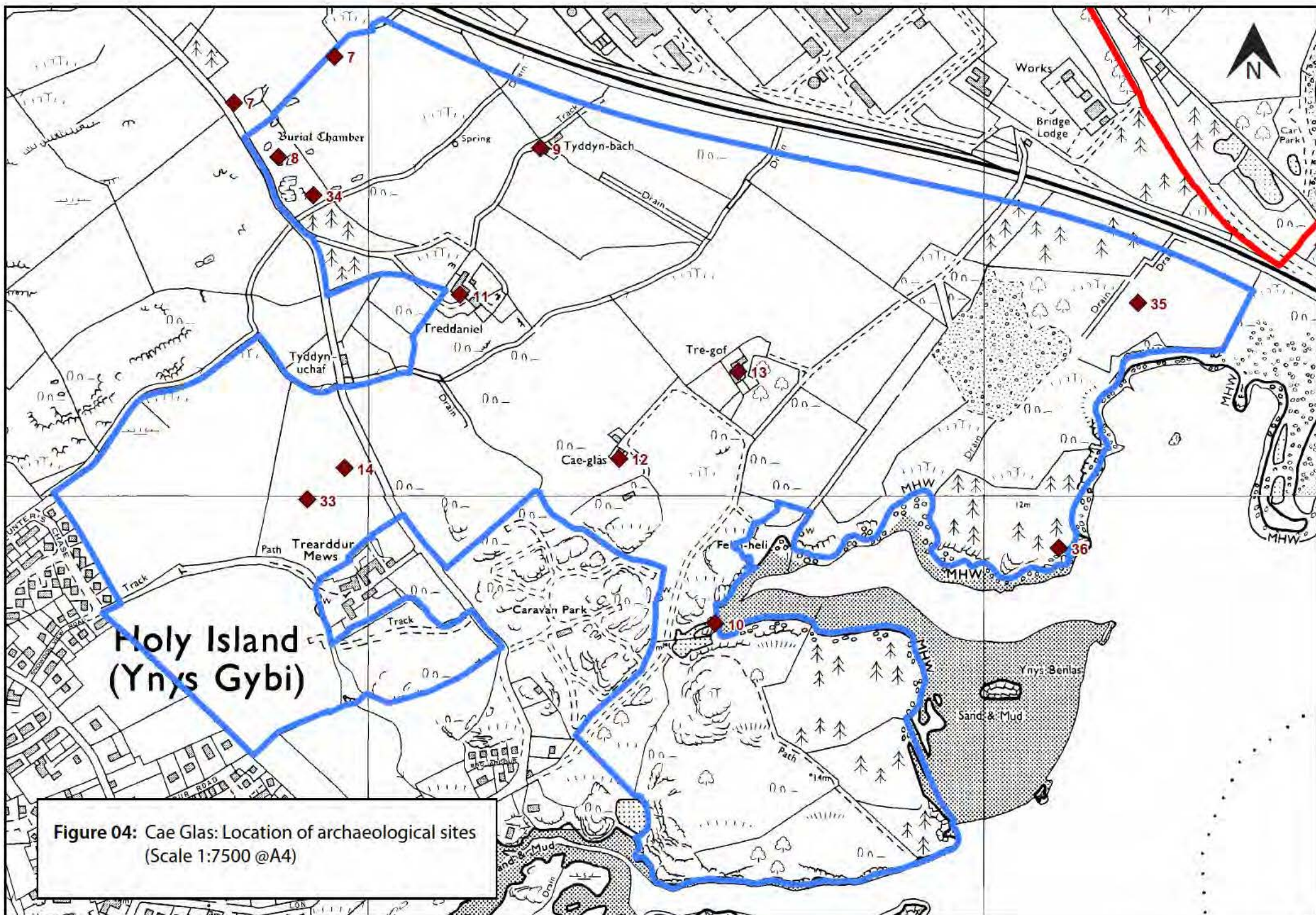


Figure 04: Cae Glas: Location of archaeological sites
(Scale 1:7500 @A4)

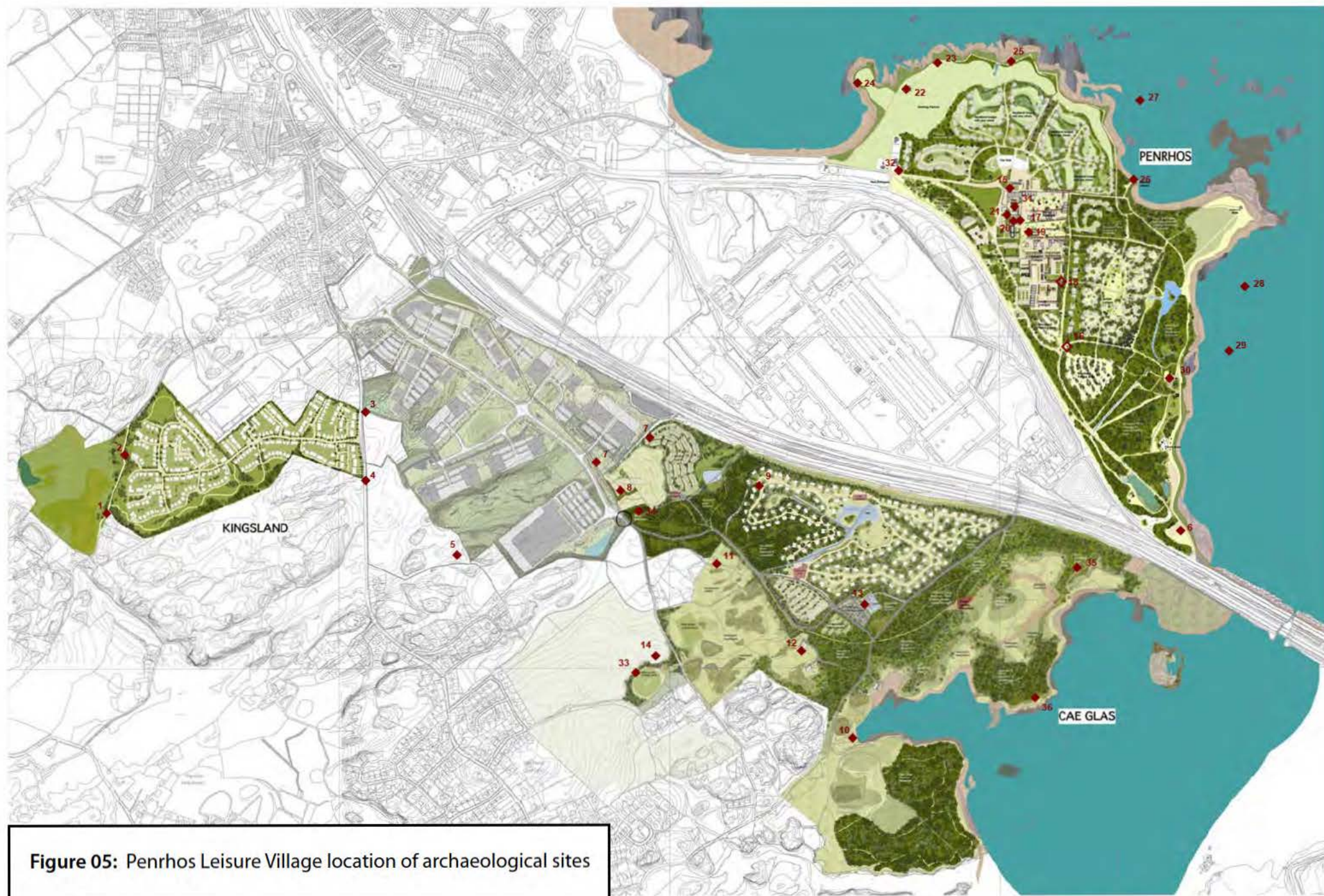


Figure 05: Penrhos Leisure Village location of archaeological sites



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