

WRITTEN SCHEME OF INVESTIGATION

FOR AN ARCHAEOLOGICAL

WATCHING BRIEF

AT FRIOG CORNER, DOLGELLAU, GWYNEDD

Prepared for:

Natural Resources Wales

Project No: 2599

September 2018



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Figure 1. Scheme location

Figure 2. Detailed plan of the site, showing the new sea defences.

Summary

This Written Scheme of Investigation (WSI) details the methodology for a watching brief to be undertaken by Archaeology Wales Ltd (henceforth AW) at the request of Natural Resources Wales (henceforth NRW).

The watching brief will be undertaken during ground works associated with the construction of a new revetment and slipway as part of repairs and improvements to the sea defence scheme at Friog Corner, near Dolgellau, Gwynedd, centred on National Grid Reference (NGR) SH 61091 12019. The watching brief will also include the repositioning of Fairbourne Anti-Invasion Defences (Scheduled Ancient Monument ME252).

The site lies within the Scheduled Ancient Monument (SAM) area of Fairbourne Anti-Invasion Defences. Scheduled Monument Consent has been obtained to allow the movement and replacement of the defences for the work. Consultation between Gwynedd Archaeological Trust (GAT) and NRW also highlighted the known presence of buried peat deposits at the Friog end of Fairbourne Beach. A palaeoenvironmental investigation carried out by AW in May 2018 was able to characterise these deposits as having been laid down in a fenland environment during the Neolithic period (between c. 3400 cal BC and 2600 cal BC) (Philp 2018). Gwynedd Archaeological Planning Service (GAPS) have recommended that the works be monitored in the form of an archaeological watching brief in order to mitigate the impact on the archaeological resource.

All work will be undertaken in accordance with the standards and guidelines of the Chartered Institute for Archaeologists (CIfA) (2014).

1. Introduction and planning background

This WSI details the methodology for a watching brief to be undertaken during ground work associated with repairs and improvements to sea defence scheme and repositioning of Fairbourne Anti-Invasion Defences (Scheduled Ancient Monument ME252) at Friog Corner, near Dolgellau, Gwynedd (NGR SH 61091 12019) (Figure 1). The work involves the construction of a new rock armour revetment on the same alignment as the existing sea defences and a new permanent slipway (Figure 2).

The site lies within the Scheduled Ancient Monument (SAM) area of Fairbourne Anti-Invasion Defences. Scheduled Monument Consent has been obtained to allow the movement and replacement of the defences for the work. Consultation between Gwynedd Archaeological Trust (GAT) and NRW also highlighted the known presence of buried peat deposits at the Friog end of Fairbourne Beach. A palaeoenvironmental investigation carried out by AW in May 2018 was able to characterise these deposits as having been laid down in a fenland environment during the Neolithic period (between c. 3400 cal BC and 2600 cal BC) (Philp 2018). An initial borehole survey undertaken by Royal Haskoning DHV indicates the peat extends under the storm beach and is likely to be impacted during the construction of the revetment toe. Therefore, Gwynedd Archaeological Planning Service (GAPS) have

recommended that the works be monitored in the form of an archaeological watching brief in order to mitigate the impact on the archaeological resource.

This WSI has been prepared by Dr Susan Stratton, Supervisor, AW, at the request of NRW.

The aim of the watching brief is to provide the local planning authority with sufficient information regarding the nature of archaeological remains on the site of the development, the requirements for which are set out in Planning Policy (revised edition 9, November 2016), Section 6.5 and Technical Advice Note TAN24: The Historic Environment (2017). The work is to ensure that all buried artefacts and deposits are fully investigated and recorded if they are disturbed or revealed as a result of activities associated with the development.

All work will be undertaken to the standards and guidance set by the ClfA (2014). AW is a Registered Organisation with the ClfA.

2. Site Description

The development area is located at the southern (Friog) end of Fairbourne Beach, approximately 2km south of the mouth of Afon Mawddach, in Barmouth Bay. The site lies partially within the intertidal zone. The sand beach slopes gently upwards to the shingle storm beach. The existing sea defences consist of a concrete sea wall at the top of the shingle beach, which extends northwards along the beach to Fairbourne. Beyond the sea wall to the west the land is flat and low-lying before rising steeply to the crags of Mynydd Graig-wen.

The underlying geology of the area is defined by the Maentwrog Formation and consists of a sedimentary bedrock of mudstone and siltstone formed during the Cambrian Period (BGS 2017).

3. Archaeological background

The site area includes the SAM Fairbourne Anti-Invasion Defences (ME252), which is a single 2.3km line of concrete anti-tank blocks located at the top of the beach in front of the sea wall, with five pillboxes along the length now in various states of repair. It dates to the early period of World War II, between 1940 and 1941, and was part of Western Command's coastal crust defences against a perceived threat of a German invasion from Ireland. In 2015 GAT carried out a survey and photographic recording (Kenney and Rimmer 2016) of the one complete surviving pillbox (PRN 34151) and the base of another (PRN 34152) in advance of cleaning and conservation work. Twenty-three of the tank-traps were recorded, twenty due to the presence of incised graffiti contemporary with the blocks' creation. Scheduled Monument Consent has been obtained from Cadw to include moving the tank traps during the works and replacing them afterwards.

In March 2018, AW were commissioned by NRW to carry out a palaeoenvironmental investigation of the buried deposits within the area of the proposed defences to mitigate the effect of the works. The fieldwork for this was carried out in May 2018, with six cores

taken along the base of the storm beach. A single buried peat deposit was encountered, which was subsequently radiocarbon dated to between c. 3400 cal BC and 2600 cal BC and identified through pollen analysis as a fenland landscape (Philp 2018). Restrictions caused by the presence of the large stones of the storm beach and then the existing sea defences meant that samples were taken lower down the beach, below the storm beach. A borehole survey previously undertaken by Royal Haskoning DHV indicates that the peat deposits extend westward under the storm beach and the development area, and is therefore likely to be impacted during the construction of the revetment toe.

4. Objectives

This WSI sets out a program of works to ensure that the watching brief will meet the standard required by ClfA's *Standard and Guidance for Archaeological Watching Briefs (2014)*.

The main objectives of the watching brief will be:

- to allow the rapid investigation and recording of any archaeological features that are uncovered during the proposed groundworks within the application area, with particular regard to surviving environmental deposits;
- to provide the opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief are not sufficient to support the treatment to a satisfactory or proper standard;
- to ensure that the method statement and the Scheduled Monument Consent for the repositioning of the Fairbourne Anti-Invasion Defences (Scheduled Ancient Monument ME252) is adhered to and any damage to the scheduled monument is avoided.

A written report will be compiled following the fieldwork. Sufficient desk-top research will be undertaken to ensure that the results of this work are properly understood, interpreted and reported.

The report will include a comprehensive assessment of the historic context within which the archaeological evidence rests and will aim to highlight any relevant research issues within regional, national and, if relevant, international research frameworks.

4.1. Site specific research objectives

The site has potential to contribute to both palaeoenvironmental and maritime aspects of the national research framework, as laid out in the Research Framework for the Archaeology of Wales (2011–2017). In particular, the framework highlights the need to improve our understanding of the evolution of estuaries and coastlines, and the role human communities may have played in that, and the way human communities reacted to coastal environmental and sea level change.

The palaeoenvironmental report produced by AW on behalf of NRW in connection with these works has already made significant contributions to our understanding of changes in the coastal environment at Fairbourne in prehistory (Philp 2018). As noted in the report, it is highly likely that the peat layer identified will extend higher up the beach and be encountered during the groundworks. It is also possible that earlier peat deposits or artefacts/features associated with the known Neolithic peat deposits may be encountered. Therefore, the watching brief and the resulting report will be undertaken with consideration of these wider research objectives.

5. Timetable of works

5.1. Fieldwork

The watching brief will be undertaken during all ground works associated with the proposed development as well as during the repositioning of Fairbourne Anti-Invasion Defences (Scheduled Ancient Monument ME252). The work is scheduled to start in November 2018, although it does not yet have a confirmed date. Archaeology Wales will update GAPS with the exact date when it is known. The likely duration of the work is six weeks.

5.2. Report delivery

The report will be submitted to NRW and to GAPS within three months of the completion of the fieldwork. A copy of the report will also be sent to the regional Historic Environment Record (HER).

6. Fieldwork

6.1. Detail

An archaeological watching brief will be undertaken during both the repositioning of the tank blocks and all intrusive ground works associated with the development.

6.1.1 Repositioning the tank traps

The watching archaeologist will observe all the tank blocks affected by the works prior to their relocation. Any graffiti contemporary with the use of the monument not recorded by the GAT report (Kinney and Rimmer 2016) will be recorded and photographed. It is possible that the removal of the surrounding shingle will expose previously obscured inscriptions.

Any new blocks identified as having graffiti will be spatially located using a GPS. They will be recorded in line with the methodology used by GAT, noting condition, location (whether it remains *in situ* or not), its current exposure, and the details of the graffiti. Photographs will be taken of at least two views including a scale.

Once the blocks have been relocated they will be examined again in case new surfaces have been exposed.

6.1.2 Intrusive groundworks

The watching brief during the ground works will be undertaken using a tracked 360 degree excavator equipped with a flat-bladed bucket, and will be monitored by a suitably qualified archaeologist. The work will be undertaken to meet the standard required by ClfA's *Standard and Guidance for Watching Briefs* (2014).

The site archaeologist undertaking the watching brief will be afforded the required access by the main contractor in order to observe and where necessary to record any archaeological remains revealed. Groundwork will not be undertaken without the presence of the site archaeologist. The site archaeologist will record finds and less significant archaeological deposits and features without significant delay to the work program.

The watching brief archaeologist will be aware that, as well as the likelihood of encountering buried peat deposits, there is potential for contemporary lithic artefacts, principally chert, from the period of peat formation. Particular care will be given to the recovery of such artefacts.

Where significant or complex archaeological deposits or features are encountered there will be a requirement for those areas to be fenced off and highlighted to all contractors employed on the site. Machines or contractors shall not enter this area until archaeological recording has been completed. If significant archaeological features are revealed during the work a meeting between NRW, GAPS and AW will be called at the earliest convenience.

To comply with professional guidelines, a contingency for additional access to each such area and for a team of additional archaeologists to be employed should be provided. Contingency costs will be agreed in advance before any extension to the programme commences and will follow a site meeting between Archaeology Wales, NRW and GAPS.

6.2. Recording

Recording will be carried out using AW recording systems (pro-forma context sheets etc) using a continuous number sequence for all contexts.

Plans and sections will be drawn to a scale of 1:50, 1:20 and 1:10 as required and related to Ordnance Survey datum and published boundaries where appropriate.

All features identified will be tied in to the OS survey grid and fixed to local topographical boundaries.

Photographs will be taken in digital format with an appropriate scale, using a 12MP camera with photographs stored in Tiff format.

The archaeologist undertaking the watching brief will have access to the AW metal detector and be trained in its use.

6.3. Finds

The professional standards set in the ClfA's *Standard and guidance for the collection, documentation, conservation and research of archaeological* (2014) will form the basis of finds collection, processing and recording.

All manner of finds regardless of category and date will be retained.

Finds recovered that are regarded as Treasure under *The Treasure Act 1996* will be reported to HM Coroner for the local area.

Any finds which are considered to be in need of immediate conservation will be referred to a UKIC qualified conservator (normally Phil Parkes at Cardiff University).

6.4. Environmental sampling strategy

Deposits with a significant potential for the preservation of palaeoenvironmental material will be sampled, by means of the most appropriate method (bulk, column etc). It is highly likely that significant environmental deposits will be encountered on the site. However, where these deposits can be identified as equivalent to the deposits already sampled in the palaeoenvironmental investigation (Philp 2018) repeat samples will not be necessary. If sampling of peat deposits is required these will be taken in monolith tins and cores using a wider gouge auger, depending on the depths of the sediments.

Where sampling will provide a significant contribution to the understanding of the site AW will draw up a site-specific sampling strategy alongside a specialist environmental archaeologist. All environmental sampling and recording and will follow English Heritage's *Guidelines for Environmental Archaeology* (2002).

6.5. Human remains

In the event that human remains are encountered, their nature and extent will be established and the coroner informed. All human remains will be left *in situ* and protected during backfilling. Where preservation *in situ* is not possible the human remains will be fully recorded and removed under conditions that comply with all current legislation and include acquisition of licenses and provision for reburial following all analytical work. Human remains will be excavated in accordance with the ClfA's *Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains: Technical Paper Number 13* (1993).

A meeting with GAPS, NRW and AW will be called if the human remains uncovered are of such complexity or significance that the contingency arrangement (6.1 above) would not be of sufficient scope.

6.6. Specialist advisers

In the event of certain finds, features or sites being discovered, AW will seek specialist opinion and advice. A list of specialists is given in the table below although this list is not exhaustive.

Artefact type	Specialist
Military	Paul Huckfield (Glamorgan Gwent Archaeological Trust)
Flint	Kate Pitt (Archaeology Wales)
Animal bone	Richard Madgwick (Cardiff University)
CBM, heat affected clay, Daub etc.	Rachael Hall (APS)
Clay pipe	Hilary Major (Freelance)
Glass	Rowena Hart (Archaeology Wales)
Cremated and non-cremated human bone	Malin Holst (University of York)/Richard Madgwick (Cardiff University)
Metalwork	Kevin Leahy (University of Leicester)/ Quita Mold (Freelance)
Metal work and metallurgical residues	Dr Tim Young (GeoArch)
Neo/BA pottery	Dr Alex Gibson (Bradford University)
IA/Roman pottery	Jane Timby (Freelance)
Roman Pottery	Rowena Hart (Archaeology Wales)/ Peter Webster (Freelance)
Post Roman pottery	Stephen Clarke (Monmouthshire Archaeology)
Charcoal (wood ID)	John Carrot (Freelance)
Waterlogged wood	Nigel Nayling (University of Wales – Lampeter)
Molluscs and pollen	Dr James Rackham
Charred and waterlogged plant remains	Wendy Carruthers (Freelance)

6.6.1. Specialist reports

Specialist finds and palaeoenvironmental reports will be written by AW specialists, or sub-contracted to external specialists when required.

7. Monitoring

GAPS will be contacted approximately five days prior to the commencement of archaeological site works, and subsequently once the work is underway.

Any changes to the WSI that AW may wish to make after approval will be communicated to GAPS for approval on behalf of the Planning Authority.

Representatives of GAPS will be given access to the site so that they may monitor the progress of the field evaluation. No area will be back-filled until GAPS has had the opportunity to inspect it, unless permission to do so has been given in advance. GAPS will be kept regularly informed about developments, both during the site works and subsequently during post-excavation.

8. Post-fieldwork programme

8.1. Archive assessment

8.1.1. Site archive

An ordered and integrated site archive will be prepared in accordance with: Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2006) upon completion of the project.

The site archive (including artefacts and samples) will be prepared in accordance with the National Monuments Record (Wales) agreed structure and deposited with an appropriate receiving organisation, in compliance with ClfA Guidelines (*Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*, 2014). The legal landowner's consent will be gained for deposition of finds.

8.1.2. Analysis

Following a rapid review of the potential of the site archive, a programme of analysis and reporting will be undertaken. This will result in the following inclusions in the final report:

- Non-technical summary;
- Location plan showing the area/s covered by the watching brief, all artefacts, structures and features found;
- Plan and section drawings (if features are encountered) with ground level, ordnance datum and vertical and horizontal scales;
- Written description and interpretation of all deposits identified, including their character, function, potential dating and relationship to adjacent features. Specialist descriptions and illustrations of all artefacts and soil samples will be included as appropriate;

- An indication of the potential of archaeological deposits which have not been disturbed by the development;
- A discussion of the local, regional and national context of the remains by means of reviewing published reports, unpublished reports, historical maps, documents from local archives and the regional HER as appropriate;
- A detailed archive list at the rear listing all contexts recorded, all samples finds and find types, drawings and photographs taken. This will include a statement of the intent to deposit, and location of deposition, of the archive.

8.2. Reports and archive deposition

8.2.1. Report to client

Copies of all reports associated with the watching brief, together with supporting evidence in appendices as appropriate (including photographs and illustrations) will be submitted to NRW and GAPS upon completion.

8.2.2. Additional reports

After an appropriate period has elapsed, copies of all reports will be deposited with the relevant county Historical Environment Record, the National Monuments Record and, if appropriate, Cadw.

8.2.3. Summary reports for publication

Short archaeological reports will be submitted for publication in relevant journals; as a minimum, a report will be submitted to the annual publication of the regional CBA group or equivalent journal.

8.2.4. Notification of important remains

Where it is considered that remains have been revealed that may satisfy the criteria for statutory protection, AW will submit preliminary notification of the remains to Cadw.

8.2.5. Archive deposition

The final archive (site and research) will, whenever appropriate, be deposited with a suitable receiving institution, usually the relevant Local Authority museums service. Arrangements will be made with the receiving institution before work starts.

Although there may be a period during which client confidentiality will need to be maintained, copies of all reports and the final archive will be deposited no later than six months after completion of the work.

Copies of all reports, the digital archive and an archive index will be deposited with the *National Monuments Record*, RCAHMW, Aberystwyth.

Wherever the archive is deposited, this information will be relayed to the HER. A summary of the contents of the archive will be supplied to GAPS.

8.2.6. Finds deposition

The finds, including artefacts and ecofacts, excepting those which may be subject to the Treasure Act, will be deposited with the same institution, subject to the agreement of the legal land owners.

9. Staff

The project will be managed by Rowena Hart (AW Regional Director) and the fieldwork undertaken by a suitably qualified member of AW field staff. Any alteration to staffing before or during the work will be brought to the attention of GAPS and NRW.

Additional Considerations

10. Health and Safety

10.1. Risk assessment

Prior to the commencement of work AW will carry out and produce a formal Health and Safety Risk Assessment in accordance with *The Management of Health and Safety Regulations* 1992. A copy of the risk assessment will be kept on site and be available for inspection on request. A copy will be sent to the client (or their agent as necessary) for their information. All members of AW staff will adhere to the content of this document.

10.2. Other guidelines

AW will adhere to best practice with regard to Health and Safety in Archaeology as set out in the FAME (Federation of Archaeological Managers and Employers) health and safety manual *Health and Safety in Field Archaeology* (2002).

11. Community Engagement and Outreach

Wherever possible, AW will ensure suitable measures are in place to inform the local community and any interested parties of the results of the site investigation work. This may occur during the site investigation work or following completion of the work. The form of any potential outreach activities may include lectures and talks to local groups, interested parties and persons, information boards, flyers and other forms of communication (social media and websites), and press releases to local and national media.

The form of any outreach will respect client confidentiality or contractual agreements. As a rule, outreach will be proportional to the size of the project.

Where outreach activities have a cost implication these will need to be negotiated in advance and in accordance with the nature of the desired response and learning outcomes.

12. Insurance

AW is fully insured for this type of work, and holds Insurance with Aviva Insurance Ltd and Hiscox Insurance Company Limited through Towergate Insurance. Full details of these and other relevant policies can be supplied on request.

13. Quality Control

13.1. Professional standards

AW works to the standards and guidance provided by the ClfA. AW fully recognise and endorse the ClfA's *Code of Conduct*, *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* and the *Standard and Guidance for Archaeological Watching Briefs* currently in force. All employees of AW, whether corporate members of the ClfA or not, are expected to adhere to these Codes and Standards during their employment.

13.2. Project tracking

The designated AW manager will monitor all projects to ensure that agreed targets are met without reduction in quality of service.

14. Arbitration

Disputes or differences arising in relation to this work shall be referred for a decision in accordance with the Rules of the Chartered Institute of Arbitrators' *Arbitration Scheme for the Institute for Archaeologists* applying at the date of the agreement.

15. References

Chartered Institute for Archaeologists, 2014. Standards and guidance for the collection, compilation, transfer and deposition of archaeological archives.

Chartered Institute for Archaeologists, 2014. Standards and guidance for the collection, documentation, conservation and research of archaeological materials.

Chartered Institute for Archaeologists, 2014. Standards and guidance for excavation.

Chartered Institute for Archaeologists, 2014. Standards and guidance for an archaeological watching brief.

English Heritage, 2002. Guidelines for Environmental Archaeology.

English Heritage, 2006. Management of Research Projects in the Historic Environment (MORPHE).

Kenney, J. and Rimmer, M. 2016. Second World War Defences, Fairbourne Seafront. Archaeological Recording and Excavation. Bangor: Gwynedd Archaeological Trust.

McKinley, J., Roberts C., 1993, Excavation and post-excavation treatment of cremated and inhumed human remains, Technical Paper 13.

Philp, R. 2018. A Palaeoenvironmental Investigation at Friog Corner, Fairbourne, Dolgellau. Final Report. Archaeology Wales Report No. 1708.

Websites

British Geological Survey: Geology of Britain viewer:

www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

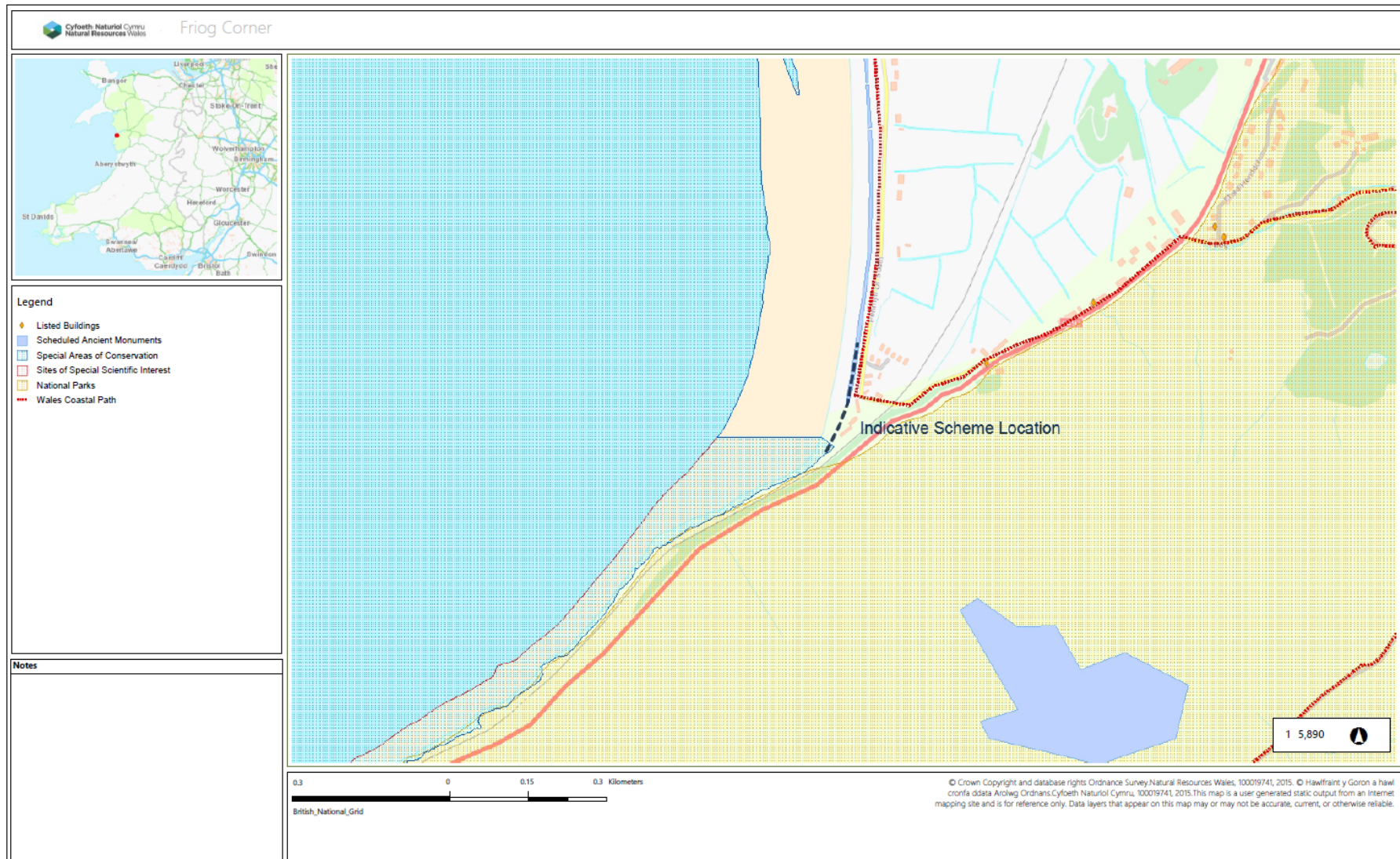
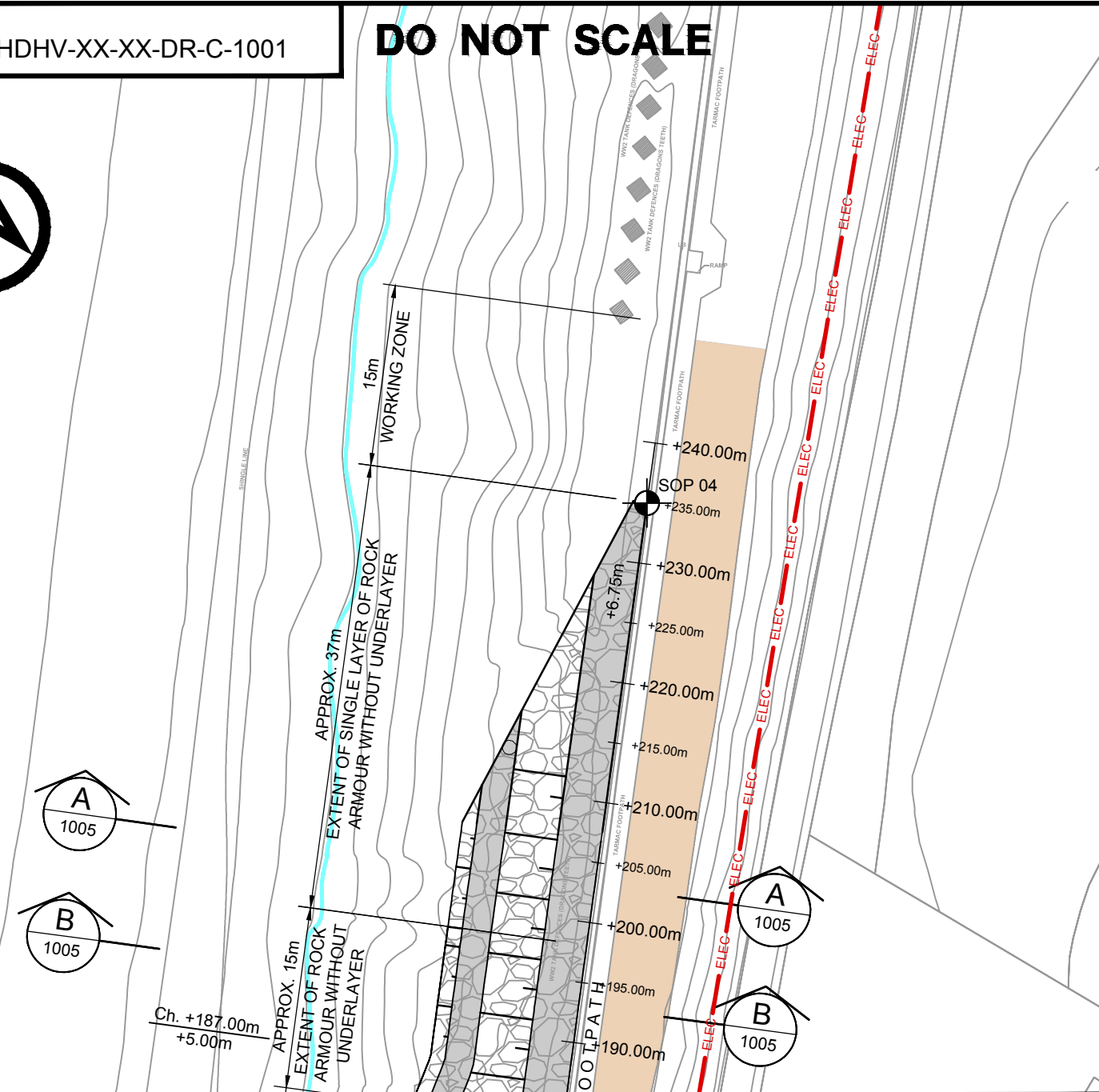


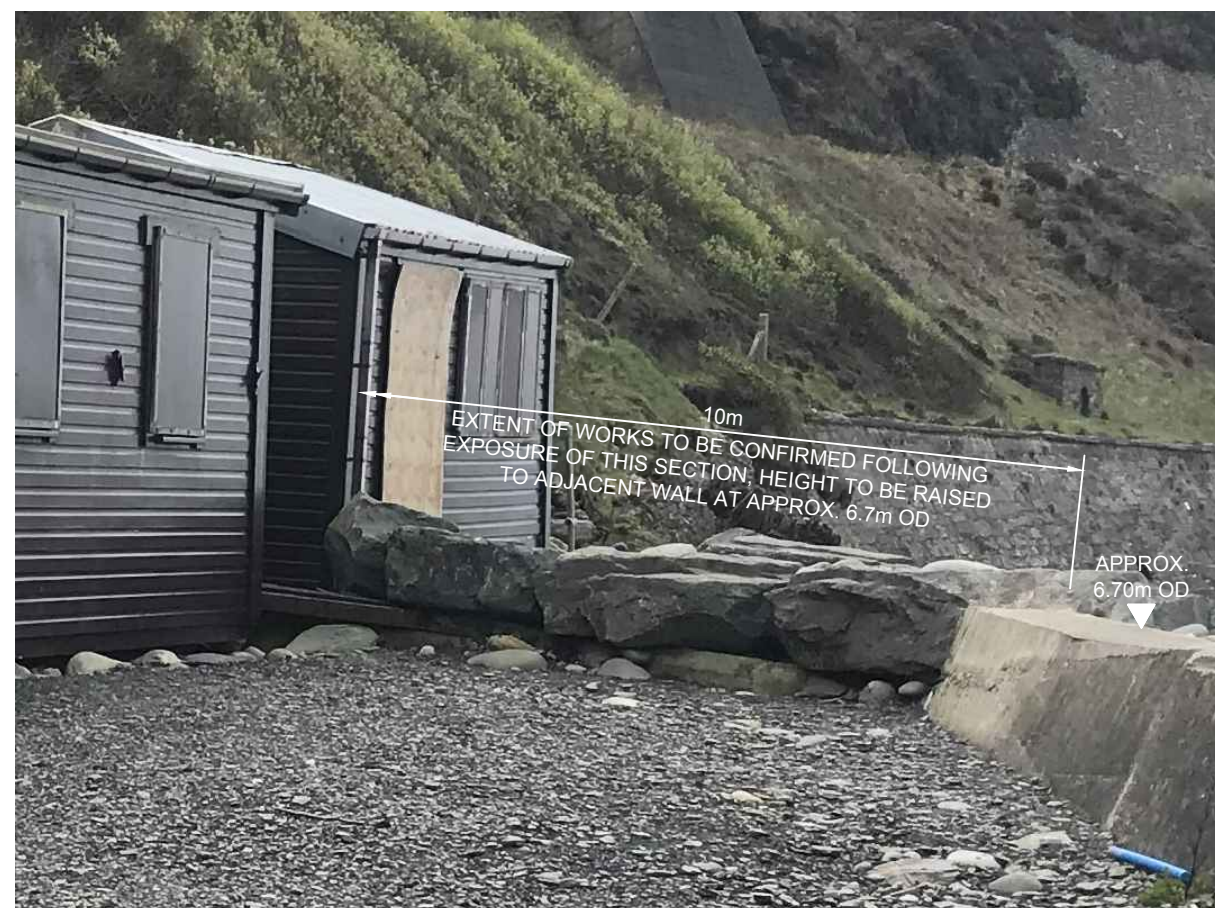
Figure 1 – Scheme Location

DO NOT SCALE



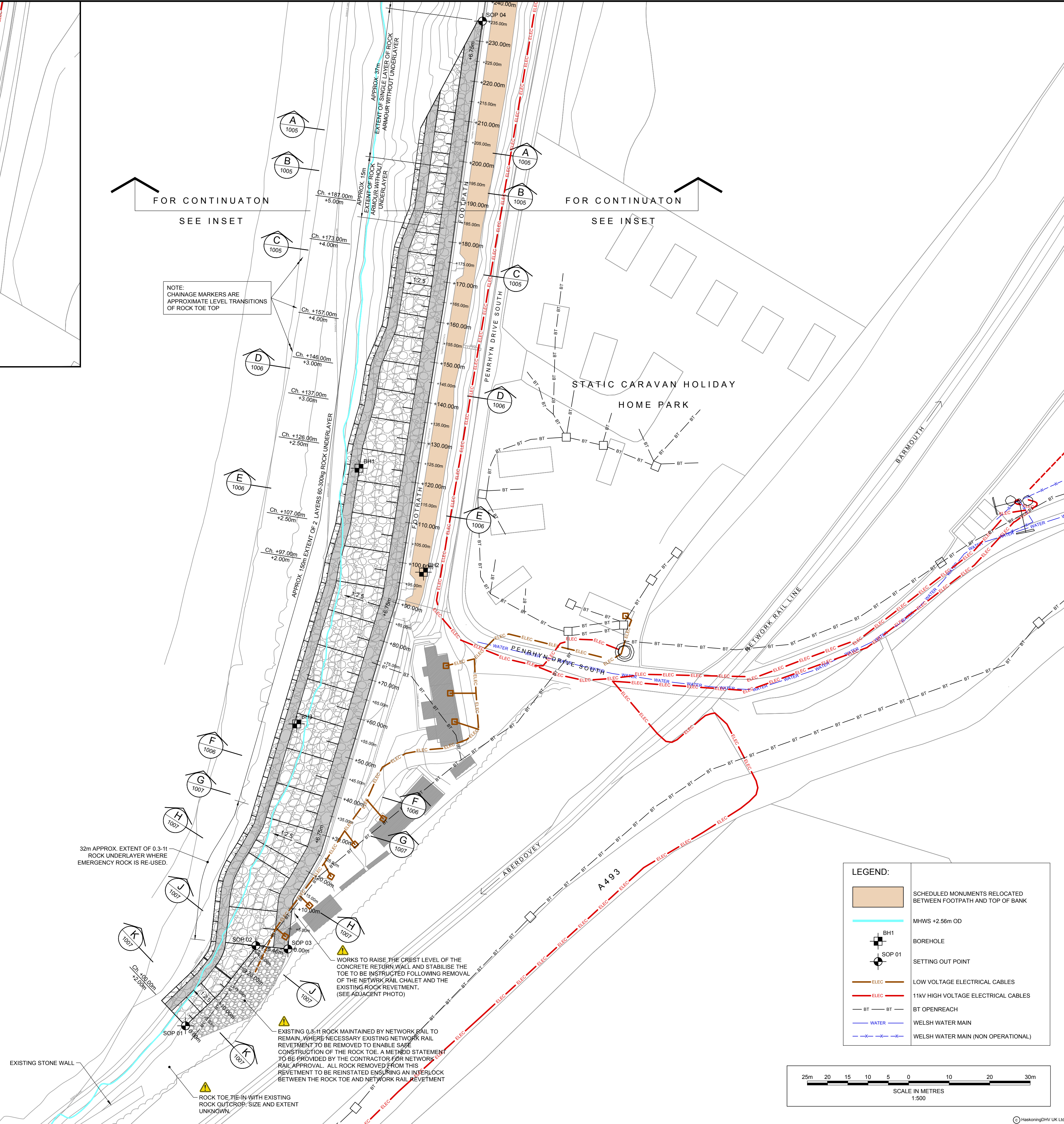
INSET CONTINUATION

IRISH SEA



PHOTOGRAPH OF EXISTING RETURN
WALL TO BE RAISED

REPRODUCED FROM ORDNANCE SURVEY MAPS WITH PERMISSION FROM
CYFOETH NATURIOL CYMRU - NATURAL RESOURCE WALES CONTRACTOR
RE-USE LICENCE No. ATI 15005a



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN (OD) UNLESS NOTED OTHERWISE.
3. ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE SURVEY NATIONAL GRID.
4. ALL MATERIALS AND WORKSMANSHIP WILL BE AS DEFINED IN THE SPECIFICATION UNLESS NOTED OTHERWISE.
5. THIS DRAWING IS BASED UPON THE TOPOGRAPHIC SURVEY COMPLETED IN MARCH 2018 BY USK LAND SURVEY.
6. THE STATUTORY SERVICES SHOWN HAVE BEEN TAKEN FROM THE WYG GROUP LTD. CONSTRUCTION PHASE PLAN. THE CONTRACTOR IS TO CARRY OUT A FULL UTILITIES SEARCH AND SURVEY OF THE ENTIRE WORKING AREA PRIOR TO COMMENCEMENT OF ANY WORKS.



SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING SIGNIFICANT RESIDUAL RISKS:

- CONSTRUCTION:
2. PUBLIC INTERFACE: PUBLIC ACCESSING THE BEACH AND FOOTPATH: RISK OF FALLING, ENTRAPMENT OR TRAFFIC ACCIDENTS.
3. TIDAL EXPOSURE: HIGH TIDE, WAVE RUN UP, AND STORM DAMAGE (SEMI-DIURNAL TIDE: 1.74m OD MLWS, 12.56m OD MHWS).
6. BEACH VARIABILITY: BEACH LEVELS FLUCTUATE, VARIABLE GROUND MAY CAUSE OVERTURNING OF PLANT.
7. DAMAGE TO EXISTING RETURN WALL (WHICH WAS DAMAGED IN 2014): FURTHER DAMAGE TO EXISTING RETURN WALL DURING EXCAVATION WORKS LEADING TO INCREASED RISK OF FAILURE.
8. DAMAGE TO EXISTING CREST WALL: RISK OF UNDERMINING DURING EXCAVATION AND REMOVAL OF ROCK AND INCREASED LOADING BY PLANT.
9. DISTURBANCE TO EXISTING WW2 TANK TRAPS: FURTHER DESTABILISING OF TANK TRAPS DURING RELOCATION. NEW DESIGN FOR RELOCATION TO BE APPROVED BY NRW and Cadw.
10. DISTURBANCE TO EXISTING ROCK ARMOUR:
 - DESTABILISING OF NETWORK RAIL ROCK ARMOUR AND THE EMERGENCY ROCK ARMOUR.
 - DISPLACEMENT AND REINSTATEMENT AT TOE OF NETWORK RAIL ROCK ARMOUR.
11. ACCESS WALL WITHIN SSSI: WORKS AT THE SOUTHERN END OF THE SITE FALL WITHIN THE SSSI (AT NETWORK RAIL ROCK ARMOUR). NO ACCESS ON TO PROTECTED REEF LOCATED WITHIN THE SSSI, 135m to the SOUTH OF THE SSSI WHICH IS SENSITIVE TO PROLONGED BURIAL UNDER SEDIMENT.
12. UTILITIES: UTILITIES IDENTIFIED AT THE NETWORK RAIL CHALET TO BE DEMOLISHED. SERVICES SEARCHES AND RECORDS TO BE COMPLETED BY CONTRACTOR PRIOR TO WORKS COMMENCING.

MAINTENANCE /OPERATION:

DEMOLITION:

SETTING OUT INFORMATION

REF	EASTING (m)	NORTHING (m)
SOP 01	261053.20	311939.73
SOP 03	261078.47	311958.67
SOP 02	261070.57	311959.50
SOP 04	261126.44	312187.43

FOR CONSTRUCTION

C2	JUNE '18	MODIFICATIONS TO SUIT CLIENTS COMMENTS	DS	DC	TE
C1	JUNE '18	CONSTRUCTION ISSUE	DS	DC	TE
P2	MAY '18	STATUTORY SERVICES & S.O. INFO ADDED	DS	DC	TE
P1	APRIL '18	FOR CLIENT REVIEW	DS	DC	TE
REV	DATE	DESCRIPTION	BY	CHK	APP

REVISIONS

PROJECT

FRIOG CORNER SEA DEFENCE REPAIR AND IMPROVEMENT WORKS

CLIENT



TITLE

PROPOSED GENERAL ARRANGEMENT PLAN



Rightwell House, Bretton,
Peterborough, PE3 8DW
Tel +44(0)1733 334455
Email info.peterborough@uk.rhdhv.com
Website www.royalhaskoning.com

DRAWN	DS	CHECKED	DC	APPROVED	TE
DATE	APRIL 2018	SCALE	AS SHOWN	REF.	FRIOG-RHDHV-XX-XX-DR-C-1001.dwg
DRAWING No.				SUITABILITY	REVISION
FRIOG-RHDHV-XX-XX-DR-C-1001				A	C2