

# MORFA HARLECH, GWYNEDD

## Briff Gwyllo Archeolegol/ Archaeological Watching Brief



Ymddiriedolaeth Archeolegol Gwynedd  
Gwynedd Archaeological Trust

# MORFA HARLECH, GWYNEDD

## Briff Gwyllo Archeolegol/Archaeological Watching Brief

Yr Amgylchedd Hanesyddol yn Cofnodi Prif Gyfeirnod /  
Historic Environment Record Event Primary Reference Number: 46076

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Location of field boundary wall (G2687\_007)

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## CRYNHODEB ANHECHNEGOL

*Comisiynwydd Gwynedd Archaeological Trust gan Natural Resources Wales i ymgymryd brîff gwylio archeolegol yn ystod gwaith cadwraeth ar gyfer y 'Sands of LIFE' prosiect cadwraeth yn Morfa Harlech, Gwynedd. Cynhaliwyd y brîff gwylio fel terfyn dwyreiniol y twyni tywod, yn agos i'r Royal St David's Golf Course. Canolbwyntiodd yr ymchwiliad ar y wal, oedd 50m o hyd, oedd wedi'i chuddio oherwydd goresgyniad tywod; ni ddarganfuwyd unrhyw weithgaredd archeolegol ychwanegol yn ystod yr ymchwiliad.*

## NON-TECHNICAL SUMMARY

*Gwynedd Archaeological Trust was commissioned by Natural Resources Wales to undertake an archaeological watching brief during conservation works for the 'Sands of LIFE' conservation project at Morfa Harlech, Gwynedd. The watching brief was conducted at the eastern limit of the sand dunes, in close proximity to the edge of the Royal St David's Golf Course. The monitored investigation focused on the 50m long wall that had been concealed due to sand incursion; no additional archaeological activity was identified during the course of the watching brief.*

# 1 INTRODUCTION

Gwynedd Archaeological Trust was commissioned by Natural Resources Wales (NRW) to undertake an archaeological watching brief during conservation works for the *Sands of LIFE (SoLIFE)* (LIFE17 NAT/UK/000023) conservation project at Morfa Harlech, Gwynedd (NGR SH57453118; postcode LL46 2NX; cf. Figure 01). The Sands of LIFE project is being led by NRW and supported by the EU LIFE fund and the Welsh Government, with the aim to restore threatened sand dune sites across Wales. As detailed in NRW document *Twyni Byw - Sands of LIFE (SoLIFE) Specification* (29 November 2020; cf. [Appendix I](#)) the lack of dynamic processes and dune over-stabilisation has had a negative impact on sand dune habitats and species across Wales and many dunes are now dominated by an overgrowth of coarse vegetation. The dune slacks are hollows within the dunes that form damp habitats, often with standing water in the winter, which support species-rich plant communities. Dune slacks often become overgrown and many have suffered from drying out with the subsequent loss of their diverse wildlife. Scraping and lowering of the sand surface, removes over-growth and reinstates the wetter conditions, which allows the characteristic plant communities to re-establish. The work at Morfa Harlech comprises a 1.8ha intervention area and includes stripping of dune turf and scraping of dune slack on land owned by Royal St David's Golf Course. The archaeological watching brief was completed on the 16<sup>th</sup> of April 2021.

The archaeological watching brief was monitored by Andrew Davidson, Chief Archaeologist, Gwynedd Archaeological Trust and undertaken in accordance with an approved written scheme of investigation ([Appendix I](#)). In line with the regional Historic Environment Record (HER) requirements, the HER was contacted at the onset of the project to ensure that any data arising was formatted in a manner suitable for accession to the HER and follows the guidance set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (The Welsh Archaeological Trusts, 2018). The HER Event Primary Reference Number for this project was 46076. All work was planned, managed and undertaken by GAT in accordance with the following standards and guidance:

1. *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (The Welsh Archaeological Trusts, 2018)
2. *Guidelines for digital archives* (Royal Commission on Ancient and Historical Monuments of Wales, 2015).
3. *Management of Archaeological Projects* (English Heritage, 1991);

4. *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide* (Historic England, 2015);
5. *Standard and Guidance for Archaeological Watching Brief* (Chartered Institute for Archaeologists, 2020); and
6. *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (Chartered Institute for Archaeologists, 2020).

Gwynedd Archaeological Trust is certified to ISO 9001:2015 and ISO 14001:2015 (Cert. No. 74180/B/0001/UK/En) and is a Registered Organisation with the Chartered Institute for Archaeologists.



## 1.1 Fieldwork Aims and Objectives

The key aims and objectives of the archaeological mitigation were to:

- Identify and record archaeological activity present on site that may be related either to a former field boundary or tramway;
- To establish the date and nature of any archaeological remains identified and assess their implications for understanding the area, in conjunction with the known archaeological record; and
- To place the results in context, reference shall be made if necessary to *A Research Framework for the Archaeology of Wales*.

## **1.2 Acknowledgements**

GAT would like to thank the following for their contribution and support:

- Client (NRW) Leigh Denyer;
- Chief Archaeologist, Gwynedd Archaeological Trust Andrew Davidson; and
- GAT team for the fieldwork and production of this report, John Roberts, Stuart Reilly and Ruairidh Stokes.

## **2 BACKGROUND**

### **2.1 Introduction**

As detailed in *Twyni Byw - Sands of LIFE: Dune rejuvenation at Morfa Harlech Sands of LIFE Code: SoLife: LIFE17 AT/UK/000023 Archaeological Screening* (Davidson, 2021), earlier studies of the dunes include a description by May (2003) which concludes that the site 'is a fine example of a multi-phase, gravel-based sand spit that has gradually built across a major infilling estuary. Much of its growth has taken place during the last 700 years'.

The dune system developed following the construction of Harlech castle (Scheduled Monument ME044) in 1283, perhaps during the storms of the 14<sup>th</sup> century. Prior to the development of the dunes it was possible to sail up to the foot of the cliffs below the castle, but within one or two centuries of its construction, the dunes had developed around a shingle ridge, making the castle land-locked. In later centuries the area landward of the dunes was enclosed in piecemeal fashion.

## 2.2 Historic Environment Record

The Historic Environment Record lists twelve sites within the local area.

- PRN 5157 Crucible, Findspot, Morfa Harlech (NGR SH56903180): Crucible found amongst the dunes of Morfa Harlech by Twm Elias, subsequent inspection of the find spot revealed thin scatter of charcoal. (Crew 1985)
- PRN 9677 Cefn Mine, Harlech (NGR SH57333228): Pile of stone rubble 5 x 17m on a slight rectangular platform 7 x 10m in size.
- 9678 Cefn Mine, Harlech Cefn Mine, Harlech (NGR SH57293229): Pump shown on OS 2nd Edition Map Sheets
- PRN 83132: Enclosure North-East of Cefn Mine, 60m x 30m (NGR SH57443250). Also shown on 1953 OS 1:10560 map
- PRN 82136 Gunnery Range Railway, Morfa Harlech (NGR SH56993332): Platoons would come from tank regiments and practice their firing on moving bogies over the sand dunes (on rails). Once a week there was always a night shoot. (Anon, 2005). The target railway formed part of the WWII Gunnery Range at Morfa Harlech. The track curved westward to the target railway from a junction to a north of Harlech station. The line of the railway, including to the junction, can be traced on modern APs and LiDAR. 1948 historic imagery shows the railway clearly.
- PRN 9679 Morfa Harlech Pond 1, Harlech (NGR SH57483264): Sub-rectangular pond aligned N-S 8 x 12m in size and at least 1m deep.
- PRN 9681 Morfa Harlech Pond 2, Harlech (NGR SH57283276): Pond on OS 2nd Edition Map
- PRN 9684 Morfa Harlech Range, Harlech (NGR SH57373273): Flat topped bank, 8m wide and several hundred metres long crossing the forestry area roughly from SE to NW. Southern face of bank faced with sand bags to 1.7m. (See PRN 83136)
- PRN 18265 Morfa Harlech Dunes, Landscape (NGR SH56753278): in the medieval period, Harlech castle and town were built on a rocky promontory above the sea. Over the next centuries, the area below the town silted up and was classed as marsh waste. The enclosure and draining of part of Morfa Harlech in 1789 by the Glyn Cywarch estate meant that the burgesses of the town lost rights of common there.
- PRN 35135 Royal St David's Golf Course, Harlech (NGR SH57633087): The golf course was founded in 1894, largely through the encouragement of W H More,

Crown Agent for Wales, who introduced George Davison to Harlech, and The Hon. Harold Finch-Hatton, fourth son of the Earl of Winchelsea and Nottingham. (See also PRN 67049)

- PRN 59644 Tramway, Harlech (NGR SH57573105): A horse tramway dating from 1878 which formerly took bathers from Noddfa Cottage (PRN 59645) to the beach. The site is now part of the golf course, opened in 1894. The tramway is evident as an embankment.

## 2.3 Historic Mapping

A brief examination of the first and second edition Meirionethshire County Series 1-inch to 25-mile map sheets XVIII.16, XIX.13, XXV.4 and XXVI.1 ([Figures 02](#) and [03](#) respectively), shows a series of field boundaries at the location of what is now Royal St. David's Golf Course. The field system on the first edition map (published 1888/9) is different to that on the editions second edition map (published 1901), with the latter map showing a more extensive field system that has expanded westwards. The 1878 tramway (PRN 59644; NGR SH57573105), present on the first edition map, is not visible on the second edition. Based on the location of the conservation intervention area (cf. [Figures 02](#) and [03](#)), the archaeological structural activity that has been identified during groundworks is possibly part of a field system present on both maps, rather than the tramway.

### **3 METHODOLOGY**

#### **3.1 Introduction**

An archaeological watching brief is defined by the Chartered Institute for Archaeologists as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme resulted in the preparation of a report and ordered archive (CIfA, 2014). The archaeological watching brief was conducted 16<sup>th</sup> April 2021.

The watching brief was undertaken during conservation works to restore 1.84ha of sand dunes within the Morfa Harlech sand dune system at the Royal St David's Golf Course estate, near Harlech, Gwynedd. The conservation works comprised four related activities within the intervention area designated in Figure 01:

- Mowing and scrub cutting: Removing scrub, grass and other dense herbaceous vegetation throughout the intervention area and rake up.
- Turf stripping: Stripping of vegetation, roots and organic soil layers across the whole intervention area.
- Dune slack scraping: within the low-lying damp dune slack area (0.34ha), following turf stripping, excavation of sand to reach the water table.
- Disposal of arisings: arisings removed to a nearby disposal area, and where During the watching brief all attendances and any identified features were recorded using GAT watching brief pro-formas.;

## **3.2 Working Project Archive**

### *3.2.1 Photographic Record*

Photographic images were taken using a digital SLR (Nikon D5100) camera set to maximum resolution (4928 x 3264) in RAW format and archived in TIFF format using Adobe Photoshop. A total of 12 photographic images were taken (archive reference numbers G2687\_001 to G2687\_012; cf [Appendix II](#) for the photographic metadata).

### *3.2.2 Written Record*

The written record was maintained on GAT pro-formas and comprised the following:

- 1 day record sheet
- 2 photographic record sheets (images G2687\_001 to G2687\_012)
- 2 drawing sheets



### 3.3 Data Management Plan

The fieldwork data has been used as the basis for the physical and digital dataset archives and used to compile the project report. The physical archive has been stored in a designated project folder and the location confirmed in the Trust project database; the digital dataset has been stored on a dedicated Trust server, with the location confirmed in the Trust project database via a specific hyperlink. There is no de-selected digital data.

External datasets for the regional HER and RCAHMW are as follows:

- HER: digital report (PDF format) and Event PRN summary (Microsoft Excel format); the report and dataset have been prepared in accordance with the required standards set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (Version 1.1); and
- RCAHMW: a digital report (PDF format) and digital archive dataset have been prepared in accordance with the *RCAHMW Guidelines for Digital Archives Version 1*.

The dataset includes:

- Photographic metadata (Microsoft Access);
- Photographic archive (TIFF format);
- Project Information form (Microsoft Excel);
- File Information form (Microsoft Excel) – Microsoft Word report text final;
- File Information form (Microsoft Excel) – Photographic metadata (general);
- File Information form (Microsoft Excel) – Adobe PDF report final; and
- File Information form (Microsoft Excel) - Photographic metadata (detail).

### 3.4 Selection Strategy

As defined in *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (Chartered Institute for Archaeologists, 2020) section 3.3.1, a project specific selection strategy and data management plan should be prepared. In support of this, the Chartered Institute for Archaeologist (CIfA), have stated that it is “widely accepted that not all the records and materials collected or created during the course of an Archaeological Project require preservation in perpetuity. These records and materials constitute the Working Project Archive which will be subject to Selection, in order to establish what will be retained for long-term curation”. The aim of selection is to ensure that all the elements retained from the Working Project Archive for inclusion in the Archaeological Archive are appropriate to establish the significance of the project and support “future research, outreach, engagement, display and learning activities”. Selection should be “focused on selecting what is to be retained to support these future needs, rather than deciding what can be dispersed” and can be qualified by a selection strategy, which details the project-specific selection process, agreed by all parties (including client and/or landowner), which will be applied to a Working Project Archive prior to its transfer into curatorial care as the Archaeological Archive.

The selection strategy takes into account:

- The aims and objectives of the project.
- The brief and/or Written Scheme of Investigation (WSI)).
- The Collecting Institution’s collection policy and/or deposition guidelines.
- Local and regional research frameworks.
- Relevant thematic or period specific research frameworks.
- The project’s Data Management Plan (DMP).
- Internal recording and reporting policies.
- Material-specific guidance documents.

The project specific selection strategy is reproduced as [Appendix III](#).

## 4 RESULTS

The remnant of the boundary wall was located at the eastern limit of the sand dunes, in close proximity to the edge of the golf club. The remains of the wall was uncovered during ground reduction works as part of the NRW project and was excavated to the level of the ground water table. Due to the ground works there was a shallow body of water located to the immediate north of the wall.

The remnants of the wall had an approximate exposed length of 50m. The exposed length of the wall was predominantly orientated northwest – southeast before turning slightly toward the north northwest at the northwestern limit. The wall had a width of between 0.46m and 0.54m and an exposed depth of 0.42m. A section of the wall, for a distance of 5.0m, was hand cleaned as part of the archaeological investigation during the watching brief, as a representative sample (Figure 04). As part of the archaeological investigation of the wall, a sondage (measured 1.60m in length and 0.25m in width) was excavated at the centre of the wall along the north northeast face of the wall to record the elevation (Figure 05). The sondage did not uncover the full elevation or height of the wall as it started to flood due to the high groundwater table. The wall was of drystone construction and was comprised of uncoursed angular slabs of slate. The slate would have been sourced from nearby slate quarries. The location of the wall was noted and further to advice from Andrew Davidson, NRW agreed to preserve the remains in-situ by covering them with sand.

The wall has been assigned PRN Number 93370.

## **5 CONCLUSION**

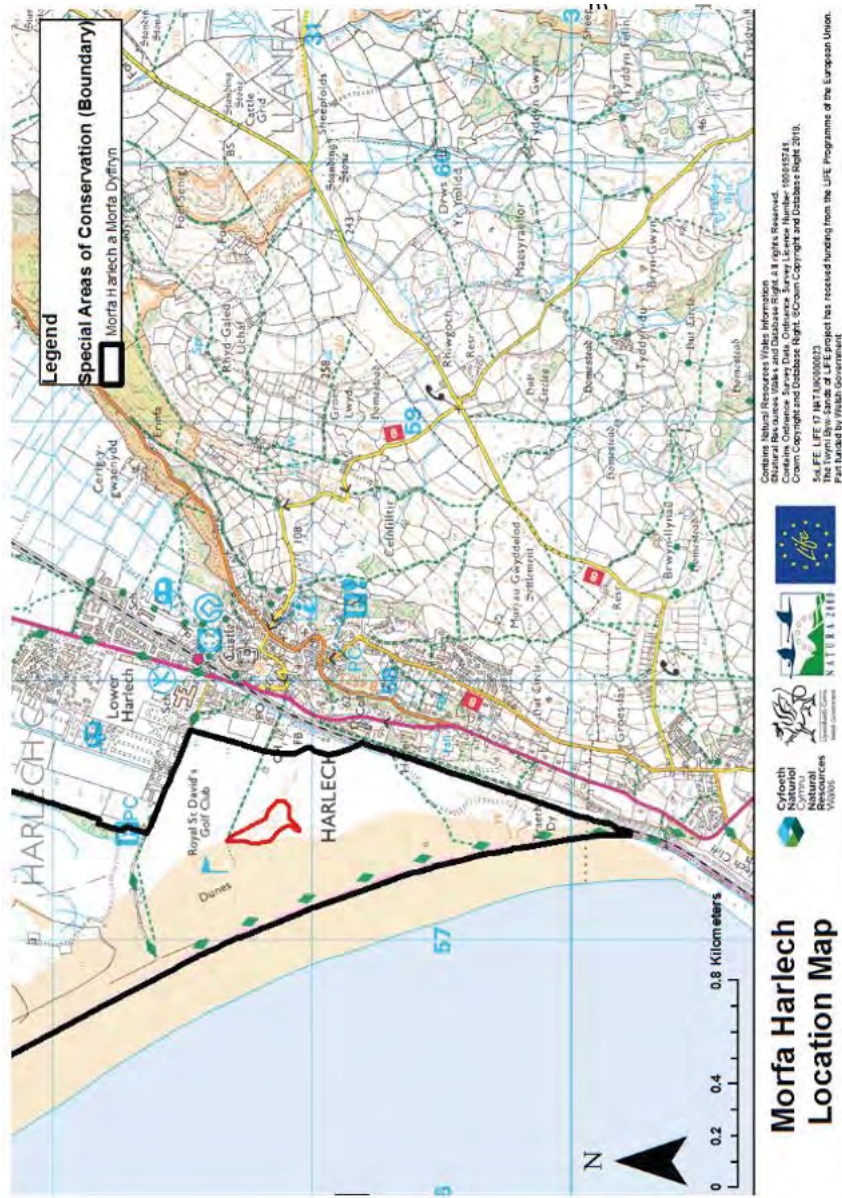
Gwynedd Archaeological Trust was commissioned by Natural Resources Wales (NRW) to undertake an archaeological watching brief during conservation works for the Sands of LIFE. During groundworks associated with the project the remnants of a drystone wall was uncovered and Andrew Davidson was contacted by Leigh Denyer for advice. As part of the archaeological watching brief, a GAT archaeologist investigated and recorded the wall. It was determined through this investigation and consulting historic mapping that this was most likely the remains of a field boundary wall that had subsequently been submerged by the sand dunes of Morfa Harlech. The location of the wall was noted and further to advice from Andrew Davidson, NRW agreed to preserve the remains in-situ by covering them with sand.

## 6 SOURCES CONSULTED

1. Chartered Institute for Archaeologists, 2020, Standard and Guidance for Archaeological Watching Brief;
2. Chartered Institute for Archaeologists, 2020, Standard and guidance for the collection, documentation, conservation and research of archaeological materials;
3. Chartered Institute for Archaeologists, 2020, *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*;
4. Davidson, A., 2021. Twyni Byw - Sands of LIFE: Dune rejuvenation at Morfa Harlech Sands of LIFE Code: SoLife: LIFE17 AT/UK/000023Archaeological Screening;
5. English Heritage, 1991, Management of Archaeological Projects (MAP2);
6. English Heritage, 2011, Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation;
7. Historic England, 2015, Management of Research Projects in the Historic Environment (MoRPHE);
8. Natural Resources Wales, 2020. *Twyni Byw - Sands of LIFE (SoLIFE) Specification*;
9. Royal Commission on Ancient and Historical Monuments of Wales, 2015, Guidelines for digital archives;
10. The Welsh Archaeological Trusts, 2018, *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (Version 1.1).

## **FIGURE 01**

**Reproduction of Plan 1: Location and access to works from Natural Resources Wales, 2020. Twyni Byw - Sands of LIFE (SoLIFE) Specification**





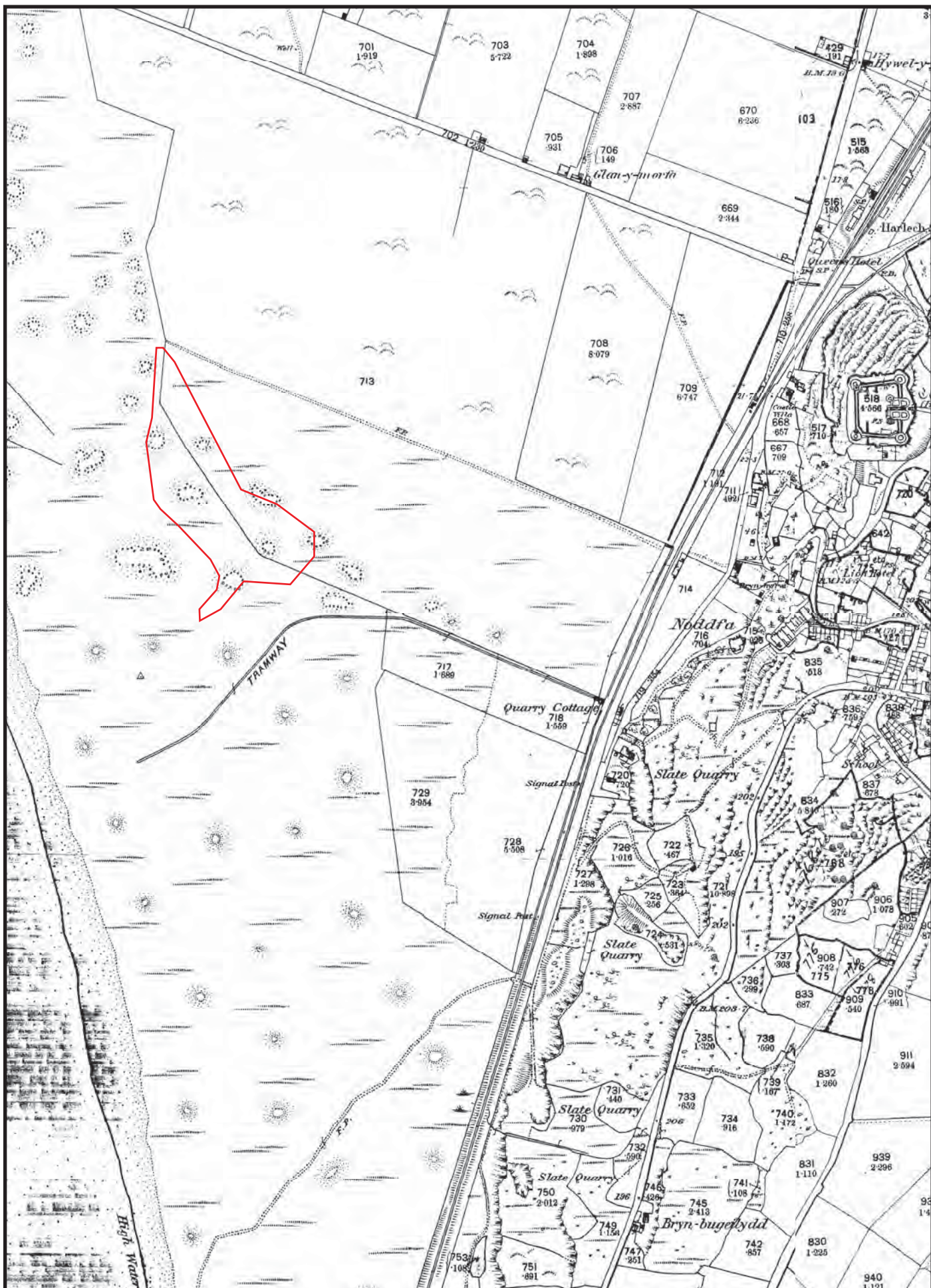
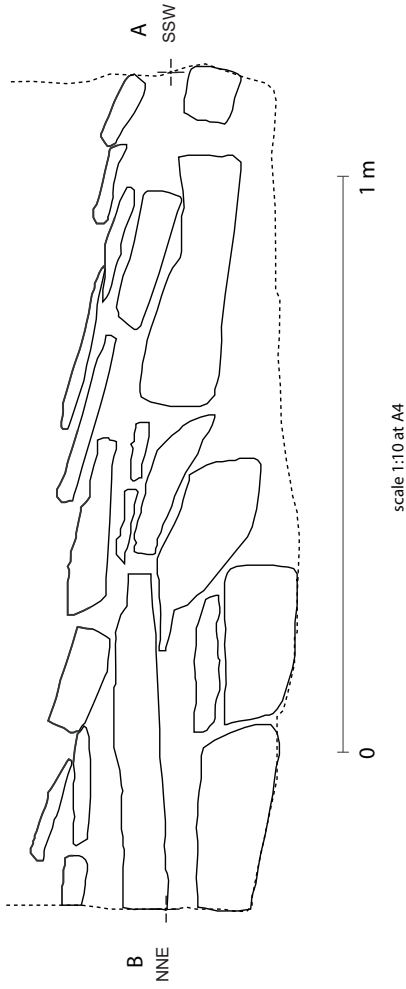



FIGURE 02: Reproduction of First Edition Meirionethshire County Series 1-Inch to 25-Mile Map Sheets XVIII.16, XIX.13, XXV.4 and XXVI.1, published 1888/9. The conservation intervention area is highlighted in red.





Figure 03

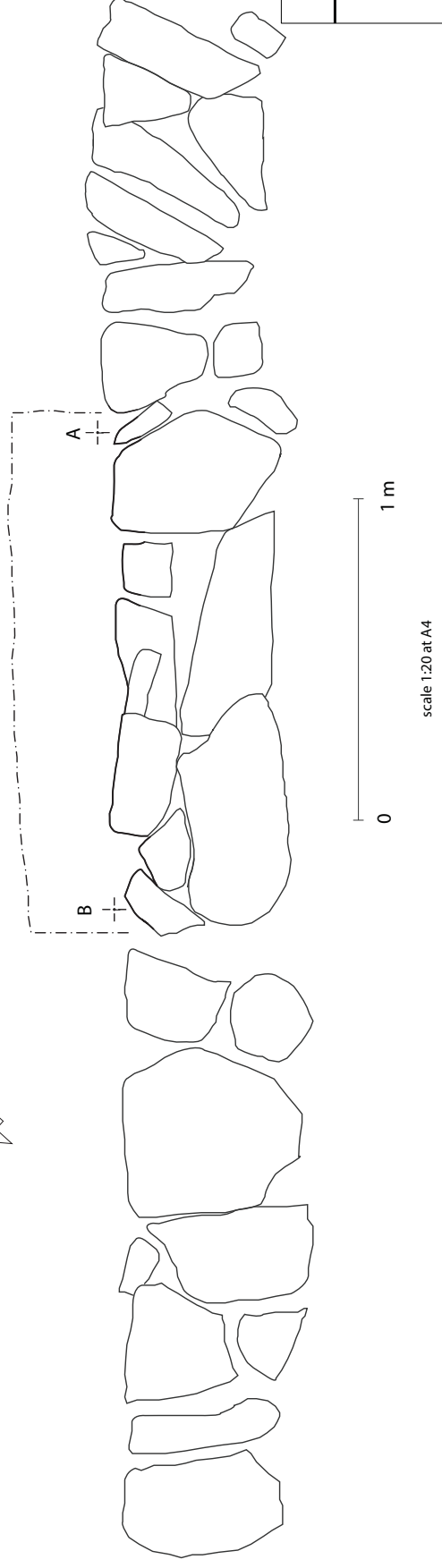





Gwynedd Archaeological Trust

**FIGURE 04:**  
NNE facing elevation;  
scale 1:10@A4

Date: 07/05/2021
Author: SR
Office: GAT
Drawing: G2007/...
Scale: 1:10@A4





Gwynedd Archaeological Trust

**FIGURE 05:**  
Plan of section of wall;  
scale 1:20@A4

Date: 07/05/2021
Author: SR
Office: GAT
Drawing: G2007/...
Scale: 1:20@A4





Plate 1: Cleaned section of the field boundary wall; scale 1x1.0m; view from WNW (archive reference G2687\_001).



Plate 2: North facing elevation of field boundary wall; scale 1x1.0m; view from N (archive reference G2687\_002).





Plate 3: Close-up of north face of field boundary wall; scale 1x1.0m; view from N  
(archive reference G2687\_004).

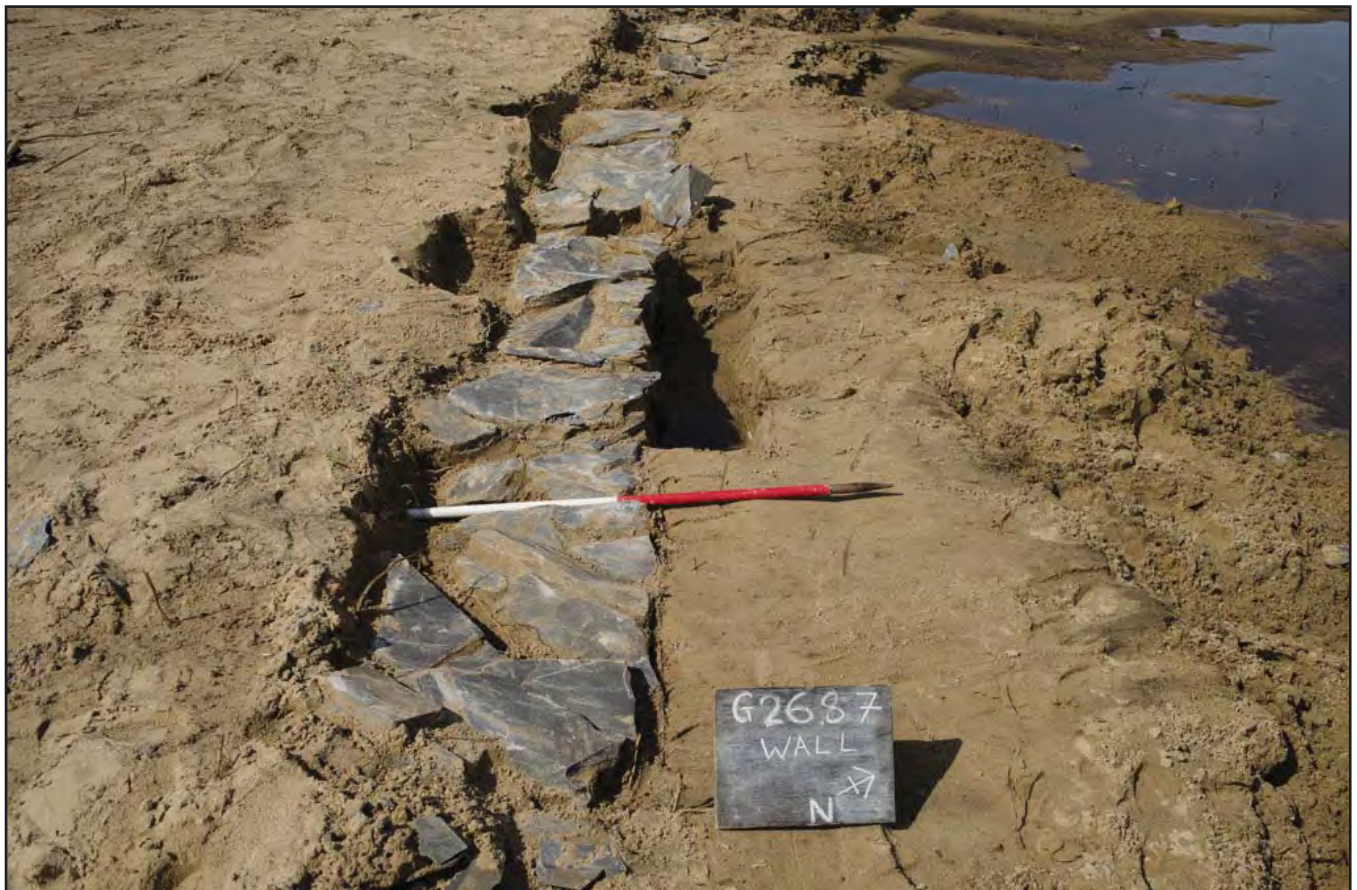


Plate 4: Cleaned section of field boundary wall; scale 1x1.0m; view from ESE  
(archive reference G2687\_006).





Plate 5: Location of field boundary wall; scale 1x1.0m; view from NNW (archive reference G2687\_007).



Plate 6: Location of field boundary wall; scale 1x1.0m; view from E (archive reference G2687\_010).





Plate 7: Eastern terminal of field boundary wall; scale 1x1.0m; view from E  
(archive reference G2687\_011).

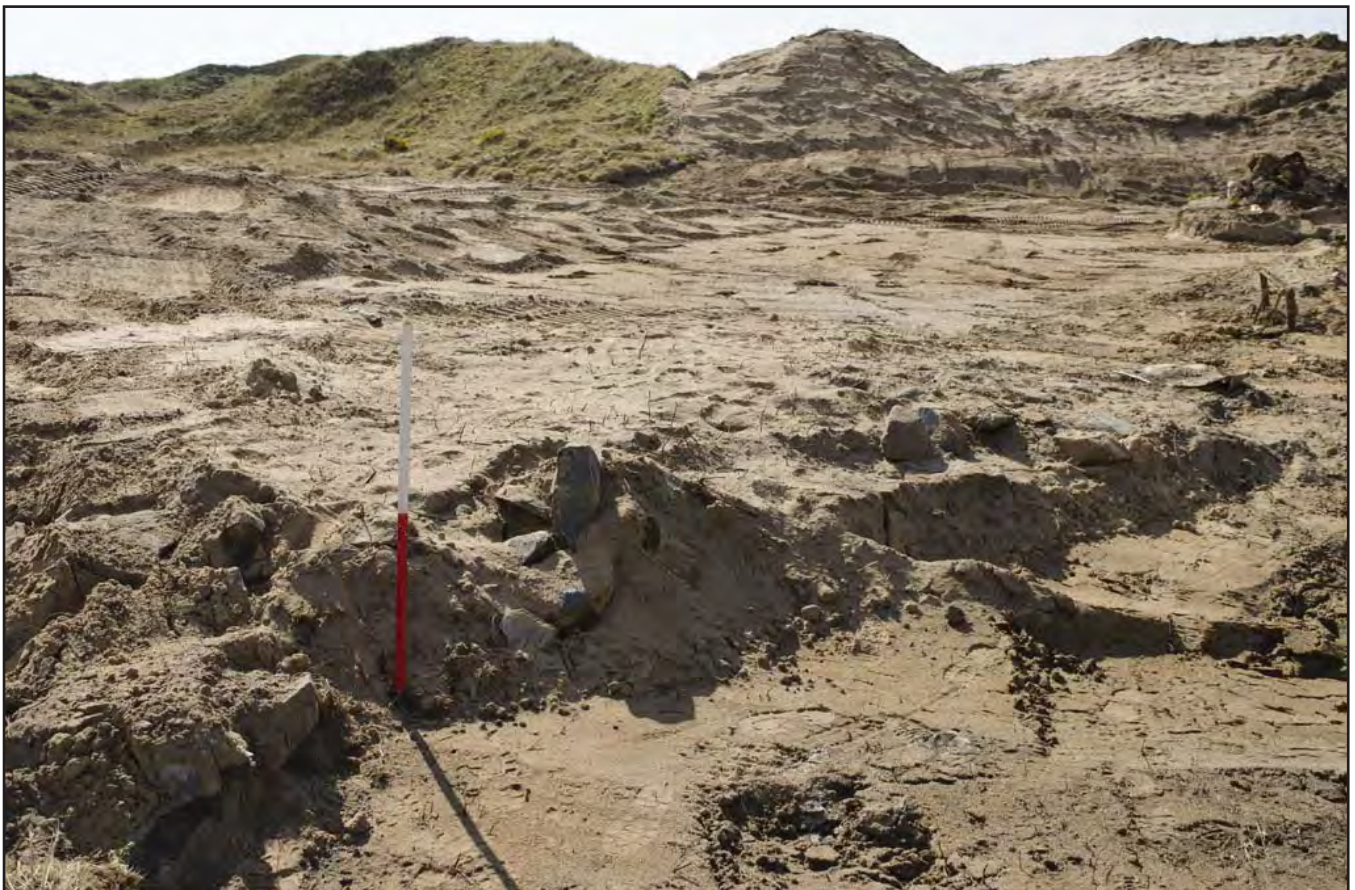


Plate 8: Disturbed eastern terminal of field boundary wall; scale 1x1.0m; view from NE  
(archive reference G2687\_012).

## **APPENDIX I**

**Reproduction of Gwynedd Archaeological Trust Written Scheme of Investigation, April 2021**

**TWYNI BYW - SANDS OF LIFE (SOLIFE):  
DUNE REJUVENATION AT MORFA HARLECH ST DAVID'S  
GOLF CLUB**

**WRITTEN SCHEME OF INVESTIGATION FOR  
ARCHAEOLOGICAL WATCHING BRIEF**

**Prepared for**

*Natural Resources Wales*

**April 2021**



Ymddiriedolaeth Archaeolegol Gwynedd  
Gwynedd Archaeological Trust



**TWYNI BYW - SANDS OF LIFE (SOLIFE):**  
**DUNE REJUVENATION AT MORFA HARLECH ST DAVID'S GOLF CLUB**  
**WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL WATCHING**  
**BRIEF (G2687)**

Prepared for *Natural Resources Wales*, April 2021

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# 1 INTRODUCTION

Gwynedd Archaeological Trust has been commissioned by Natural Resources Wales (NRW) to undertake an archaeological watching brief during conservation works for the *Sands of LIFE (SoLIFE)* (LIFE17 NAT/UK/000023) conservation project at Morfa Harlech, Gwynedd (NGR SH57453118; postcode LL46 2NX; cf. Figure 01). The Sands of LIFE project is being led by NRW and supported by the EU LIFE fund and the Welsh Government, with the aim to restore threatened sand dune sites across Wales. As detailed in NRW document *Twyni Byw - Sands of LIFE (SoLIFE) Specification* (29 November 2020; cf. [Appendix I](#)) the lack of dynamic processes and dune over-stabilisation has had a negative impact on sand dune habitats and species across Wales and many dunes are now dominated by an overgrowth of coarse vegetation. The dune slacks are hollows within the dunes that form damp habitats, often with standing water in the winter, which support species-rich plant communities. Dune slacks often become overgrown and many have suffered from drying out with the subsequent loss of their diverse wildlife. Scraping and lowering of the sand surface, removes over-growth and reinstates the wetter conditions, which allows the characteristic plant communities to re-establish. The work at Morfa Harlech comprises a 1.8ha intervention area and includes stripping of dune turf and scraping of dune slack on land owned by Royal St David's Golf Course. The archaeological watching brief is being undertaken in response to these works and will be completed during April 2021.

## 1.1 Standards and Guidance

The watching brief will be completed in accordance with the following standards and guidance:

1. *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (The Welsh Archaeological Trusts, 2018)
2. *Guidelines for digital archives* (Royal Commission on Ancient and Historical Monuments of Wales, 2015).
3. *Management of Archaeological Projects* (English Heritage, 1991);
4. *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide* (Historic England, 2015);
5. *Standard and Guidance for Archaeological Watching Brief* (Chartered Institute for Archaeologists, 2020); and
6. *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (Chartered Institute for Archaeologists, 2020).

Gwynedd Archaeological Trust is certified to ISO 9001:2015 and ISO 14001:2015 (Cert. No. 74180/B/0001/UK/En) and is a Registered Organisation with the Chartered Institute for Archaeologists.

## **1.2 Monitoring Arrangements**

The watching brief will be monitored by the Chief Archaeologist at the Gwynedd Archaeological Trust; the content of this document and all subsequent reporting by GAT must be approved by the Chief Archaeologist (GAT) prior to final issue. The Chief Archaeologist (GAT) will need to be kept informed of the project timetable and of the subsequent progress and findings. Contact details are:

Andrew Davidson

Chief Archaeologist

Gwynedd Archaeological Trust

Mobile: 07827857545

email: [andrew.davidson@heneb.co.uk](mailto:andrew.davidson@heneb.co.uk)

### **1.3 Fieldwork Aims and Objectives**

The key aims and objectives of the archaeological mitigation are to:

- identify and record archaeological activity present on site that may be related either to a former field boundary or tramway;
- The objective would be to establish the date and nature of any archaeological remains identified and assess their implications for understanding the area, in conjunction with the known archaeological record; and
- To place the results in context, reference shall be made if necessary to *A Research Framework for the Archaeology of Wales*.

## 1.4 Historic Environment Record

In line with the Gwynedd Archaeological Trust Historic Environment Record (HER) requirements, the HER has been contacted at the onset of the project to ensure that any data arising is formatted in a manner suitable for accession to the HER and follows the guidance set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (The Welsh Archaeological Trusts, 2018). The HER has been informed of the project start date, location including grid reference, estimated timescale for the work, and further relevant information associated with the project.

The GAT HER Enquiry Number for this project is GATHER 1425 and the Event PRN is 46076. The GAT HER will also be responsible for supplying Primary Reference Numbers (PRN) for any new assets identified and recorded.

Prior to submission of data to the HER on completion of the project, a bilingual event summary document will be prepared in *Microsoft Word* based on the format defined in section 4.2 of *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (Version 1.1).

## **2 BACKGROUND**

### **2.1 Introduction**

As detailed in *Twyni Byw - Sands of LIFE: Dune rejuvenation at Morfa Harlech Sands of LIFE Code: SoLife: LIFE17 AT/UK/000023 Archaeological Screening* (Davidson, 2021), earlier studies of the dunes include a description by May (2003) which concludes that the site 'is a fine example of a multi-phase, gravel-based sand spit that has gradually built across a major infilling estuary. Much of its growth has taken place during the last 700 years'.

The dune system developed following the construction of the castle in 1283, perhaps during the storms of the 14<sup>th</sup> century. Prior to the development of the dunes it was possible to sail up to the foot of the cliffs below the castle, but within one or two centuries of the construction of the castle, the dunes had developed around a shingle ridge, making the castle landlocked. In later centuries the area landward of the dunes was enclosed in piecemeal fashion.



## 2.2 Historic Environment Record

The Historic Environment Record lists twelve sites within the local area.

- PRN 5157 Crucible, Findspot, Morfa Harlech (NGR SH56903180): Crucible found amongst the dunes of Morfa Harlech by Twm Elias, subsequent inspection of the find spot revealed thin scatter of charcoal. (Crew 1985)
- PRN 9677 Cefn Mine, Harlech (NGR SH57333228): Pile of stone rubble 5 x 17m on a slight rectangular platform 7 x 10m in size.
- 9678 Cefn Mine, Harlech Cefn Mine, Harlech (NGR SH57293229): Pump shown on OS 2nd Edition Map Sheets
- PRN 83132: Enclosure North-East of Cefn Mine, 60m x 30m (NGR SH57443250). Also shown on 1953 OS 1:10560 map
- PRN 82136 Gunnery Range Railway, Morfa Harlech (NGR SH56993332): Platoons would come from tank regiments and practice their firing on moving bogies over the sand dunes (on rails). Once a week there was always a night shoot. (Anon, 2005). The target railway formed part of the WWII Gunnery Range at Morfa Harlech. The track curved westward to the target railway from a junction to a north of Harlech station. The line of the railway, including to the junction, can be traced on modern APs and LiDAR. 1948 historic imagery shows the railway clearly.
- PRN 9679 Morfa Harlech Pond 1, Harlech (NGR SH57483264): Sub-rectangular pond aligned N-S 8 x 12m in size and at least 1m deep.
- PRN 9681 Morfa Harlech Pond 2, Harlech (NGR SH57283276): Pond on OS 2nd Edition Map
- PRN 9684 Morfa Harlech Range, Harlech (NGR SH57373273): Flat topped bank, 8m wide and several hundred metres long crossing the forestry area roughly from SE to NW. Southern face of bank faced with sand bags to 1.7m. (See PRN 83136)
- PRN 18265 Morfa Harlech Dunes, Landscape (NGR SH56753278): in the medieval period, Harlech castle and town were built on a rocky promontory above the sea. Over the next centuries, the area below the town silted up and was classed as marsh waste. The enclosure and draining of part of Morfa Harlech in 1789 by the Glyn Cywarch estate meant that the burgesses of the town lost rights of common there.
- PRN 35135 Royal St David's Golf Course, Harlech (NGR SH57633087): The golf course was founded in 1894, largely through the encouragement of W H More,

Crown Agent for Wales, who introduced George Davison to Harlech, and The Hon. Harold Finch-Hatton, fourth son of the Earl of Winchelsea and Nottingham. (See also PRN 67049)

- PRN 59644 Tramway, Harlech (NGR SH57573105): A horse tramway dating from 1878 which formerly took bathers from Noddfa Cottage (PRN 59645) to the beach. The site is now part of the golf course, opened in 1894. The tramway is evident as an embankment.

## 2.3 Historic Mapping

A brief examination of the first and second edition Meirionethshire County Series 1-inch to 25-mile map sheets XVIII.16, XIX.13, XXV.4 and XXVI.1 ([Figures 02](#) and [03](#) respectively), shows a series of field boundaries at the location of what is now Royal St. David's Golf Course. The field system on the first edition map (published 1888/9) is different to that on the editions second edition map (published 1901), with the latter map showing a more extensive field system that has expanded westwards. The 1878 tramway (PRN 59644; NGR SH57573105), present on the first edition map, is not visible on the second edition. Based on the location of the conservation intervention area (cf. [Figures 02](#) and [03](#)), the archaeological structural activity that has been identified during groundworks is possibly part of a field system present on both maps, rather than the tramway.

## 3 METHODOLOGY

### 3.1 Introduction

An archaeological watching brief is defined by the Chartered Institute for Archaeologists as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive (CIfA, 2014). The ground investigation works will be undertaken by contractor on behalf of NRW during April 2021. Duration of works is to be confirmed.

The watching brief is being undertaken during conservation works to restore 1.84ha of sand dunes within the Morfa Harlech sand dune system at the Royal St David's Golf Course estate, near Harlech, Gwynedd. The conservation works comprise four related activities within the intervention area designated in Figure 01:

- Mowing and scrub cutting: Removing scrub, grass and other dense herbaceous vegetation throughout the intervention area and rake up.
- Turf stripping: Stripping of vegetation, roots and organic soil layers across the whole intervention area.
- Dune slack scraping: within the low-lying damp dune slack area (0.34ha), following turf stripping, excavation of sand to reach the water table.
- Disposal of arisings: arisings removed to a nearby disposal area, and where possible, buried.

Currently, the watching brief is not scheduled to monitor groundworks, but is being undertaken in response to the identification of archaeological structural activity during the de-turfing/dune slack scraping works. The archaeological activity may be related either to a former field boundary or tramway, although historic mapping suggests it is likely the former.

- During the watching brief all attendances and any identified features will be recorded using GAT watching brief pro-formas ([Appendix II](#));
- Photographic images will be taken using a digital SLR (camera set to maximum resolution in RAW format; a photographic record will be maintained on site using GAT pro-formas ([Appendix III](#)) and digitised in *Microsoft Access* as part of the fieldwork archive and dissemination process. Photographic images will be archived in TIFF format using Adobe Photoshop; the archive numbering system will start from G2687\_001. When

practical, a photographic ID board will be used during the watching brief inspection to record site code, image orientation and any relevant context numbers.

- Any subsurface features will be recorded photographically, with detailed notations and a measured survey (completed using a *Trimble* R8 GPS unit);
- The archaeological structure will be manually cleaned and examined to help determine visible extent, function, date and relationship to any adjacent activity; and
- Any required plans or sections to be drawn at a minimum 1:10 scale using GAT A4, A3 or A2 pro-forma permatrace.

## **3.2**

### 3.3 Artefacts

Diagnostic artefacts will be retained for further examination and identification. Pottery sherds of 19<sup>th</sup> and 20<sup>th</sup> century date will be examined on site and the context from which they were retrieved noted but the sherds will not be retained. The artefacts will be treated according to guidelines issued by the UK Institute of Conservation (Watkinson and Neal 2001) in particular the advice provided within *First Aid for Finds* (Rescue 1999) and Historic England.

Any waterlogged artefacts (e.g. wood or leather) that are to be recovered for post-excavation assessment and analysis will be processed in accordance with *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage, 2011) and specifically in accordance with Brunning and Watson (2010) for waterlogged wood and Historic England (2012) for waterlogged leather. In such cases an external specialist will be contacted to agree an appropriate sampling and recovery strategy via Lucy Whittingham | Project Manager (post-excavation) | AOC Archaeology | telephone: 0208 843 7380 | email: [lucy.whittingham@aocarchaeology.com](mailto:lucy.whittingham@aocarchaeology.com)).

All finds are the property of the landowner; however, it is Trust policy to recommend that all finds are donated to an appropriate museum (in this case Storiell, Old Board School, Lloyd Street, Llandudno LL30 2YG), where they can receive specialist treatment and study. Access to finds must be granted to the Trust for a reasonable period to allow for analysis and for study and publication as necessary. Trust staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants used by the Trust, including National Museums and Galleries of Wales at Cardiff.

All finds of treasure must be reported to the coroner for the district within fourteen days of discovery or identification of the items. Items declared Treasure Trove become the property of the Crown, on whose behalf the Portable Antiquities Scheme acts as advisor on technical matters, and may be the recipient body for the objects.

The Treasure Valuation Committee, based at the British Museum, and informed by the Portable Antiquities Scheme, will decide whether they or any other museum may wish to acquire the object. If no museum wishes to acquire the object, then the Secretary of State will be able to disclaim it. When this happens, the coroner will notify the occupier and landowner that he intends to return the object to the finder after 28 days unless he receives no objection. If the coroner receives an objection, the find will be retained until the dispute has been settled.

GAT will contact the landowner (via client) for agreement regarding the transfer of artefacts, initially to GAT and subsequently to the relevant museum (Storiel). A GAT produced pro-forma will be issued to the landowner where they are given the option to donate the finds or to record that they want them returning to them once analysis and assessment has been completed. Artefacts will be transferred to the Storiel in accordance with their guidelines.

### 3.4 Data Management Plan

Archiving will be completed based on following task list;

1. Pro-formas: all cross referenced and scanned for digital archiving;
2. Photographic Metadata: cross-referenced with all pro-formas and completed in *Microsoft Excel*;
3. Project register (*Microsoft Excel* format): cross-referenced with all pro-formas and completed in *Microsoft Excel*; and
4. Measured drawings (permatrace) (if relevant): all cross referenced and scanned for digital archiving.

This data will then be used as the basis for the physical and digital dataset archives. Information from these will be used to compile the project report. The physical archive will be stored in a designated project folder and the location confirmed in the Trust project database; the digital dataset will be stored on a dedicated Trust server, with the location confirmed in the Trust project database via a specific hyperlink. External datasets for the HER and RCAHMMW are as defined in the dissemination strategy below. De-selected digital data will be confirmed in an updated digital management plan appended to the final report.

A draft report will be submitted within one month of fieldwork completion and a final report will be submitted to the regional Historic Environment Record within six months of project completion. The report will include the following:

1. Non-technical summary (Welsh and English)
2. Introduction
3. Background
4. Methodology
5. Results
6. Conclusion
7. List of sources consulted.
8. Appendix I – approved GAT project specification
9. Appendix II – photographic metadata

On final approval, the following dissemination and archiving of the report and digital dataset will apply:



- A digital report(s) will be provided to the client and GAPS (draft report then final report);
- A digital report will be provided to the regional Historic Environment Record; this will be submitted within six months of project completion (final report only), along with a digital dataset comprising an Event PRN summary. The report and dataset will be submitted in accordance with the required standards set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (Version 1.1); and
- A digital report and digital archive dataset will be provided to Royal Commission on Ancient and Historic Monuments, Wales (final report only), in accordance with the *RCAHMW Guidelines for Digital Archives Version 1*. The dataset will be prepared in the format required by RCAHMW and will include:
  - Photographic metadata (Microsoft Access);
  - Photographic archive (TIFF format);
  - Project Information form (Excel);
  - File Information form (Excel) – Microsoft Word report text final;
  - File Information form (Excel) – Photographic metadata (general);
  - File Information form (Excel) – Adobe PDF report final; and
  - File Information form (Excel) - Photographic metadata (detail).

### 3.5

### 3.6 Selection Strategy

As defined in *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (Chartered Institute for Archaeologists, 2020) section 3.3.1, a project specific selection strategy and data management plan should be prepared. In support of this, the Chartered Institute for Archaeologist (CIfA), have stated that it is “widely accepted that not all the records and materials collected or created during the course of an Archaeological Project require preservation in perpetuity. These records and materials constitute the Working Project Archive which will be subject to Selection, in order to establish what will be retained for long-term curation”. The aim of selection is to ensure that all the elements retained from the Working Project Archive for inclusion in the Archaeological Archive are appropriate to establish the significance of the project and support “future research, outreach, engagement, display and learning activities”. Selection should be “focused on selecting what is to be retained to support these future needs, rather than deciding what can be dispersed” and can be qualified by a selection strategy, which details the project-specific selection process, agreed by all parties (including GAT, client and/or landowner), which will be applied to a Working Project Archive prior to its transfer into curatorial care as the Archaeological Archive.

The selection strategy will be confirmed in the watching brief report and will take into account:

- The aims and objectives of the project.
- The brief and/or Written Scheme of Investigation (WSI)).
- The Collecting Institution’s collection policy and/or deposition guidelines.
- Local and regional research frameworks.
- Relevant thematic or period specific research frameworks.
- The project’s Data Management Plan (DMP).
- Internal recording and reporting policies.
- Material-specific guidance documents.

The selection strategy pro-forma is included as [Appendix IV](#).

## 4 PERSONNEL

The project will be managed by John Roberts, Principal Archaeologist GAT Contracts Section with attendances on-site undertaken by a GAT Project Archaeologist(s). The Project Archaeologist will be responsible for following:

- All archaeological watching brief duties on site;
- Client/contractor liaison;
- GAT liaison, with regular updates;
- specialist liaison (if relevant);
- completing all on site pro-formas and the fieldwork archive itemised in [para. 2.5](#);
- sourcing Primary Reference Numbers (PRN) from the GAT HER for any new features identified;
- completing an event summary and creating or updating PRN data, dependent on results; and
- for submitting a draft final report (or interim report) for project manager review and approval, to then be submitted as per the arrangements defined in [para. 4](#).

## **5 HEALTH AND SAFETY**

The GAT Project Archaeologist(s) will be CSCS certified. Copies of the site specific risk assessment will be supplied to the client and sub-contractor prior to the start of fieldwork. Any risks and hazards will be indicated prior to the start of work via a submitted risk assessment. All GAT staff will be issued with required personal safety equipment, including high visibility jacket, steel toe-capped boots and hard hat. All GAT fieldwork is undertaken in accordance with the Trust's Health and Safety Manual, Policy and Handbook which were prepared by Ellis Whittam. All work will be undertaken in accordance with the client and site contractors Health and Safety requirements.

The conservation area is undulating sand dunes with some steep faces; one area (0.35 ha) is lower lying and damp. The vegetation is comprised of dense growth of coarse grasses, tall ruderal plants (e.g. willow herb), bramble and some young willow scrub regrowth. Older willow scrub has been cleared previously but reasonably large roots remain in situ. The dune slack area is waterlogged in wet periods.

## **6 SOCIAL MEDIA**

One of the key aims in the GAT mission statement is to improve the understanding, conservation and promotion of the historic environment in our area and inform and educate the wider public. To help achieve this, GAT maintains an active social media presence and seeks all opportunities to promote our projects and results. With permission, GAT would like the opportunity to promote our work on this scheme through our social media platforms. This could include social media postings during our attendance on site as well as any postings to highlight results. In all instances, approval will be sought from client prior to any postings.

*Any social media output will be further to the agreement of NRW.*

## **7 INSURANCE**

### **7.1 Public/Products Liability**

Limit of Indemnity- £5,000,000 any one event in respect of Public Liability

INSURER Aviva Insurance Limited

POLICY TYPE Public Liability

POLICY NUMBER 24765101CHC/UN/000375

EXPIRY DATE 21/06/2021

### **7.2 Employers Liability**

Limit of Indemnity- £10,000,000 any one occurrence.

The cover has been issued on the insurers standard policy form and is subject to their usual terms and conditions. A copy of the policy wording is available on request.

INSURER Aviva Insurance Limited

POLICY TYPE Employers Liability

POLICY NUMBER 24765101CHC/UN/000375

EXPIRY DATE 21/06/2021

### **7.3 Professional Indemnity**

Limit of Indemnity- £5,000,000 in respect of each and every claim

INSURER Hiscox Insurance Company Limited

POLICY TYPE Professional Indemnity

POLICY NUMBER PL-PSC10002389775/00

EXPIRY DATE 22/07/2021

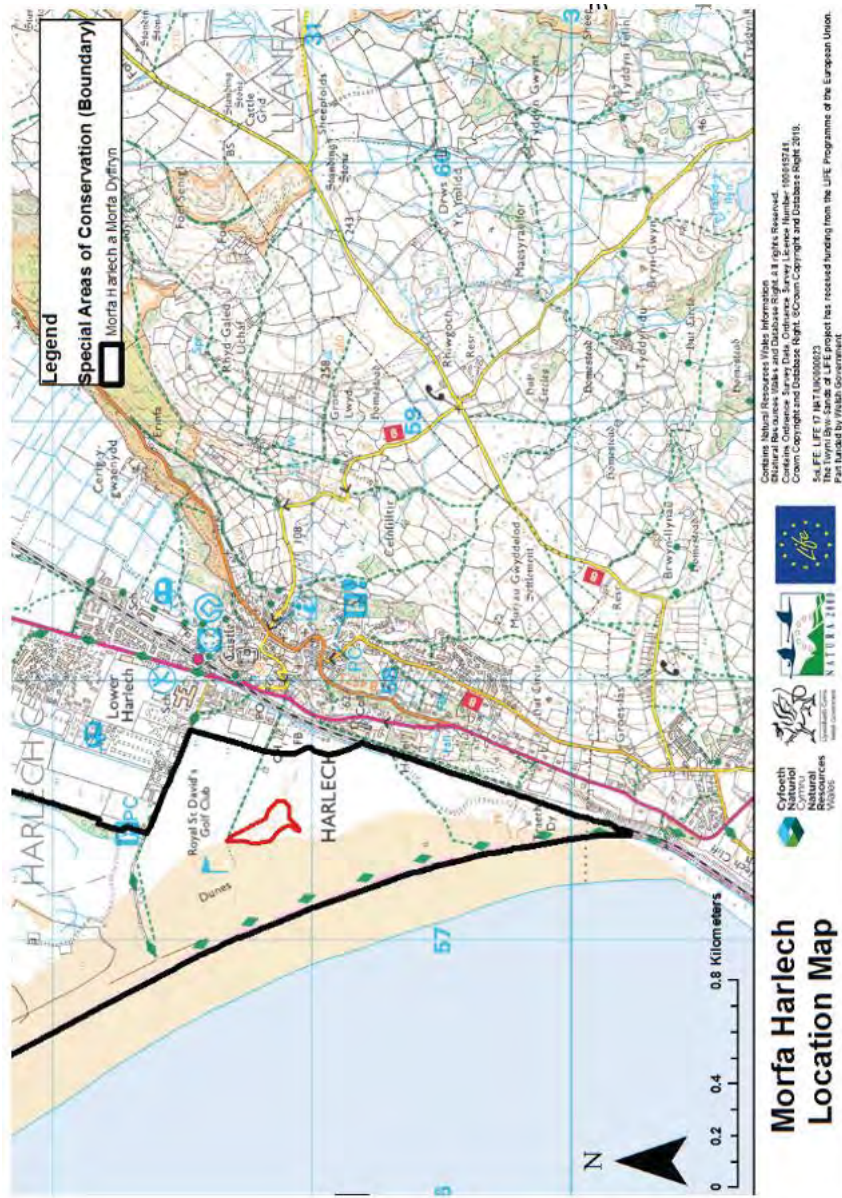
## 8 SOURCES CONSULTED

1. Brunning, R and Watson, J 2010, *Waterlogged Wood: Guidelines on the Recording, Sampling, Conservation and Curation of Waterlogged Wood* (3<sup>rd</sup> edition)
2. Chartered Institute for Archaeologists, 2020, *Standard and Guidance for Archaeological Watching Brief*
3. Chartered Institute for Archaeologists, 2020, *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*
4. Chartered Institute for Archaeologists, 2020, *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*
5. Davidson, A., 2021. Twyni Byw - Sands of LIFE: Dune rejuvenation at Morfa Harlech  
Sands of LIFE Code: SoLife: LIFE17 AT/UK/000023Archaeological Screening
6. English Heritage, 1991, *Management of Archaeological Projects (MAP2)*
7. English Heritage, 2011, *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation*
8. English Heritage, 2012, *Waterlogged Organic Artefacts, Guidelines on their Recovery, Analysis and Conservation*
9. Historic England, 2004, *Human Bones from Archaeological Sites Guidelines for producing assessment documents and analytical reports*
10. Historic England, 2015, *Management of Research Projects in the Historic Environment (MoRPHE)*
11. Natural Resources Wales, 2020. *Twyni Byw - Sands of LIFE (SoLIFE) Specification*
12. Royal Commission on Ancient and Historical Monuments of Wales, 2015, *Guidelines for digital archives*
13. The Welsh Archaeological Trusts, 2018, *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs) (Version 1.1)*
14. Watkinson, D and Neal, V, 2001, *First aid for finds* (3rd edition).

## **FIGURE 01**

**Reproduction of Plan 1: Location and access to works from Natural Resources Wales, 2020. Twyni Byw - Sands of LIFE (SoLIFE) Specification**





## **FIGURE 02**

**Reproduction of First Edition Meirionethshire County Series 1-Inch to 25-Mile Map Sheets XVIII.16, XIX.13, XXV.4 and XXVI.1, published 1888/9. The conservation intervention area is highlighted in red.**



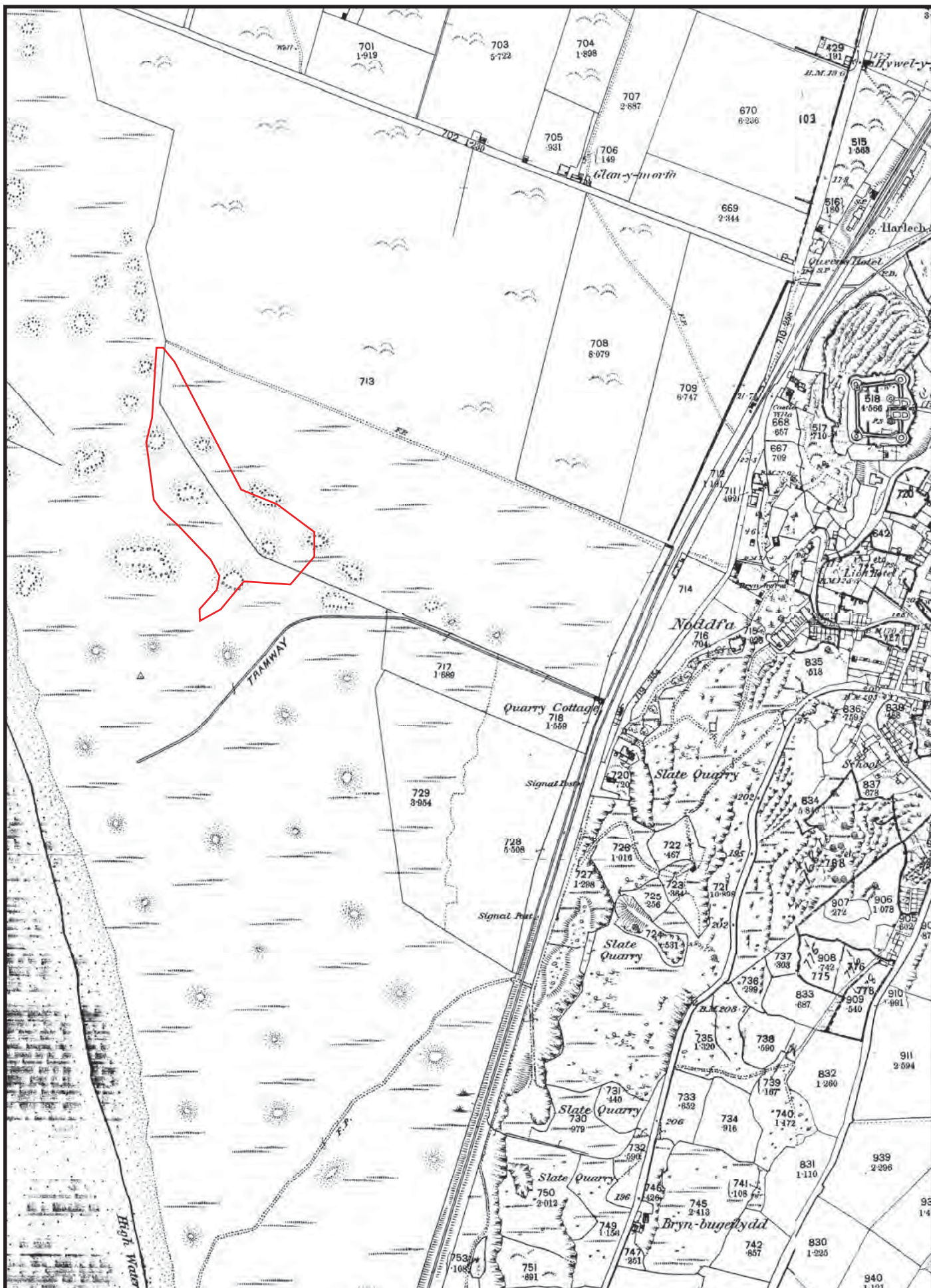


FIGURE 02: Reproduction of First Edition Meirionethshire County Series 1-Inch to 25-Mile Map Sheets XVIII.16, XIX.13, XXV.4 and XXVI.1, published 1888/9. The conservation intervention area is highlighted in red.

### **FIGURE 03**

**Reproduction of Second Edition Meirionethshire County Series 1-Inch to 25-Mile Map Sheets XVIII.16, XIX.13, XXV.4 and XXVI.1, published 1901. The conservation intervention area is highlighted in red.**



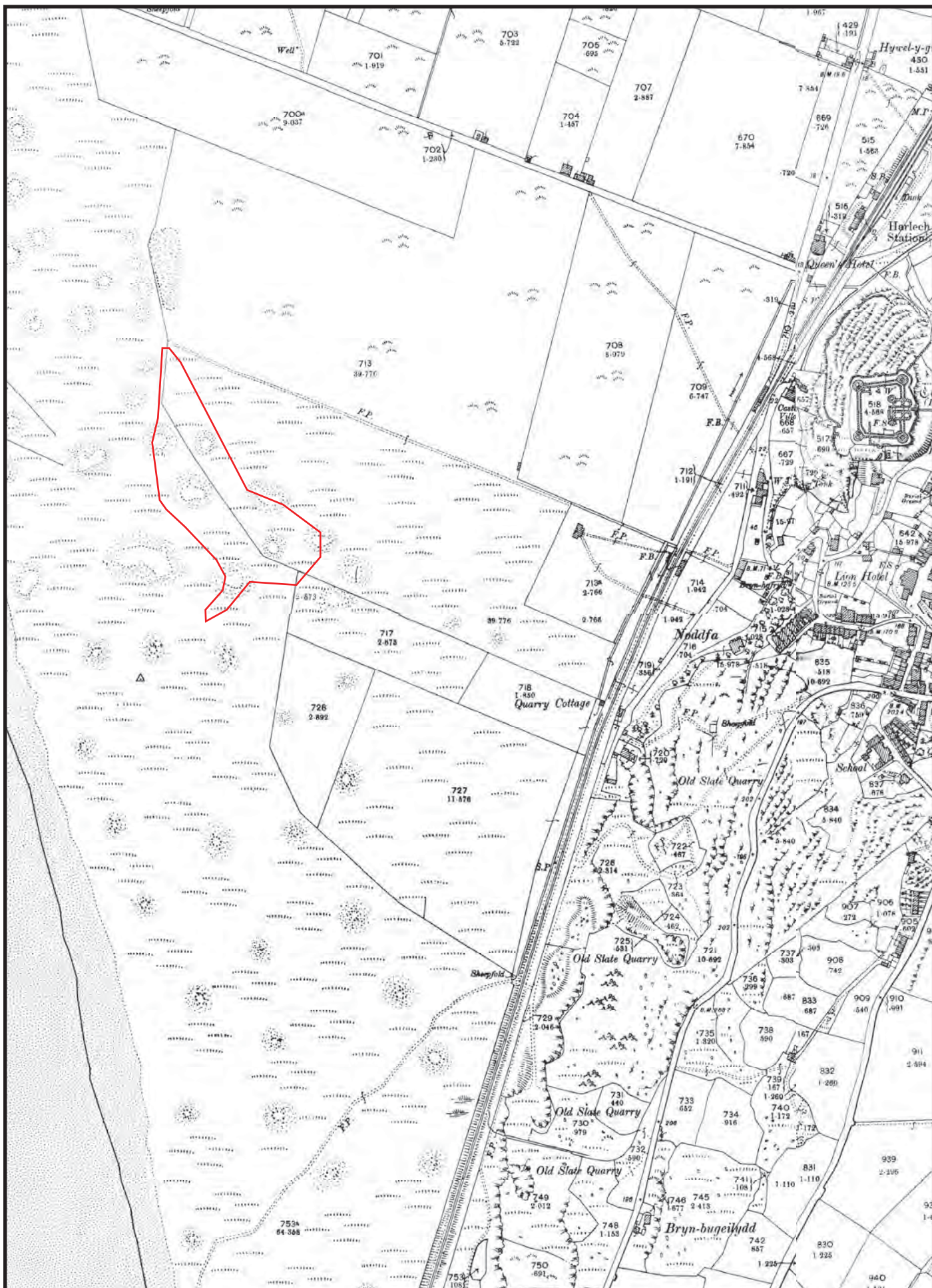


FIGURE 03: Reproduction of Second Edition Meirionethshire County Series 1-Inch to 25-Mile Map Sheets XVIII.16, XIX.13, XXV.4 and XXVI.1, published 1901. The conservation intervention area is highlighted in red.

## **APPENDIX I**

**Reproduction of Twyni Byw - Sands of LIFE (Solife) Specification,  
Natural Resources Wales, November 2020**

## Twyni Byw - Sands of LIFE (SoLIFE) Specification

**Contract title: Dune rejuvenation at Morfa Harlech St David's Golf Club**

**Date: 29 November 2020**

**Sands of LIFE Code: SoLIFE: LIFE17 NAT/UK/000023**

**Sands of LIFE contract reference number: SoLIFE N2020/08**

**Framework: NRW43257 Steep Ground Operations using Walking Excavator**

### Introduction

Sands of LIFE (SoLIFE) (LIFE17 NAT/UK/000023) is a major conservation project, led by NRW and supported by the EU LIFE fund and the Welsh Government, which will restore threatened sand dune sites across Wales.

SoLIFE is now seeking to let a contract to restore dunes in a 1.8 ha intervention area, by stripping of dune turf and scraping a dune slack at Morfa Harlech, on land owned by Royal St David's Golf Course.

### Project actions

This contract will contribute to the delivery of the following SoLIFE action:

- C1.2 Reprofilling Dunes
- C2.2 Dune Slack Scrape

### Rationale

The lack of dynamic processes and dune over-stabilisation has had a negative impact on sand dune habitats and species across Wales. Many dunes are now dominated by an over-growth of coarse vegetation. Areas of bare sand created through shallow scraping and removal of organic top soil, will restore the dune to an early successional stage, allowing rare pioneer flora and fauna, including threatened bryophytes and invertebrates to recolonise. The bare sand areas will also increase the mobility of sand, enabling natural dynamic processes, including increasing the supply of calcareous 'sand rain' which helps to maintain high pH in the dunes.

In a healthy dune system, dune slacks (hollows within the dunes) are damp habitats, often with standing water in the winter, which support species-rich plant communities. In addition to becoming overgrown, many dune slacks have suffered from drying out



with the subsequent loss of their diverse wildlife. Scraping and lowering of the sand surface, removes over-growth and reinstates the wetter conditions, which allows the characteristic plant communities to re-establish.

## Summary of requirements

This contract is to restore 1.84 ha of sand dunes within the Morfa Harlech sand dune system at the Royal St David's Golf Course estate, near the town of Harlech, Gwynedd.

The contractor is required to carry out four related activities in the intervention area:

- a) **Mowing and scrub cutting:** Remove scrub, grass and other dense herbaceous vegetation throughout the intervention area and rake up.
- b) **Turf stripping:** Strip away vegetation, roots and organic soil layers across the whole intervention area.
- c) **Dune slack scraping:** In the low-lying damp dune slack area (0.34ha), following turf stripping, excavate sand to reach the water table.
- d) **Disposal of arisings:** In each case of a-c above arisings will be removed to a nearby disposal area, and where possible, buried.

## Contacts

### SoLIFE Project Officer/primary point of contact

Leigh Denyer, Sands of LIFE Project and Monitoring Officer

Email: [leigh.denyer@cyfoethnaturiolcymru.gov.uk](mailto:leigh.denyer@cyfoethnaturiolcymru.gov.uk)

Tel: 0300 065 3581

Address: Natural Resources Wales, Welsh Government Building, Rhodfa Padarn, Aberystwyth, SY23 3UR

SoLIFE Assistant Project Officer

Jake Burton, Sands of LIFE Assistant Project Officer

Email: [jake.burton@cyfoethnaturiolcymru.gov.uk](mailto:jake.burton@cyfoethnaturiolcymru.gov.uk)

Tel: 0300 065 3744

Mobile: 07814 362403

Address: Natural Resources Wales, Maes y Ffynnon, Bangor, LL57 2DW

Site Manager

Rhys Butler, Royal St Davids Golf Course Grounds Supervisor;

Tel: 07793 848287 01766 780361

Any queries prior to submitting a quotation for the work, please contact the project officer.



Prior to the start of works the contractor will be required to attend a pre commencement meeting with SoLIFE staff and the management team from Royal St. David's Golf Club.

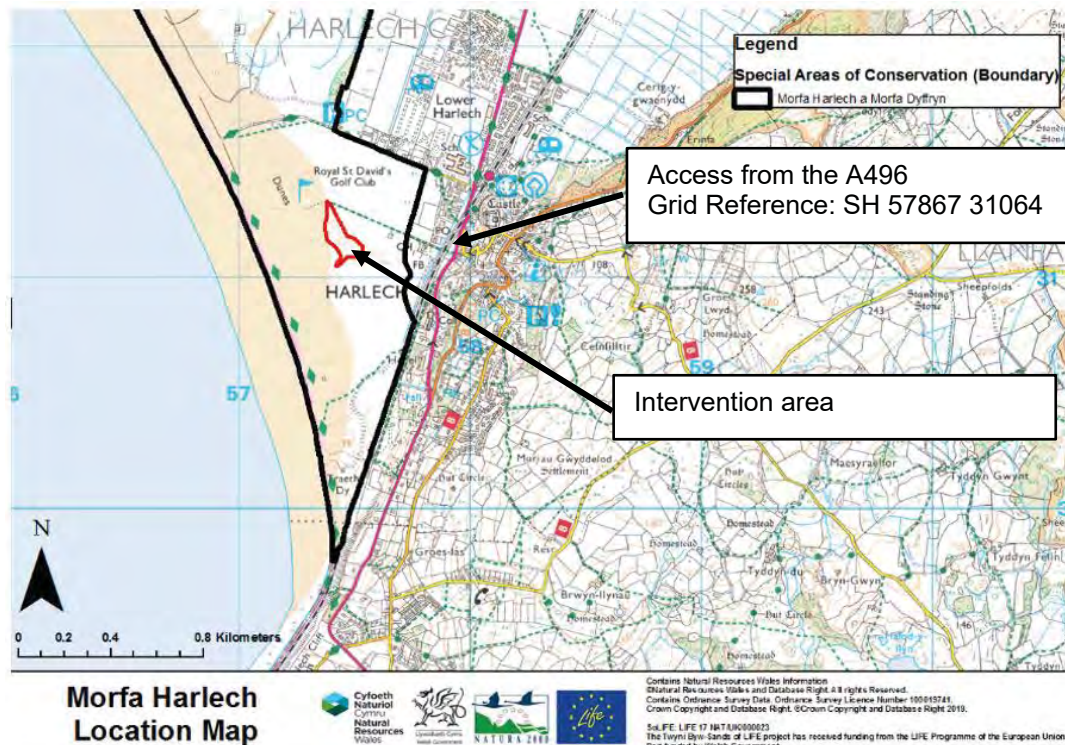
SoLIFE Officer will advise works on site and will make regular visits to the site during the works.

The contractor will be responsible for liaising with the SoLIFE Officer and Site Manager on a day-to-day basis, for example, to advise them of your movements, gain vehicle access, and for health and safety purposes etc.

The contractor shall specify a lead contact and Project Manager for the contract prior to the start of works.

## Location

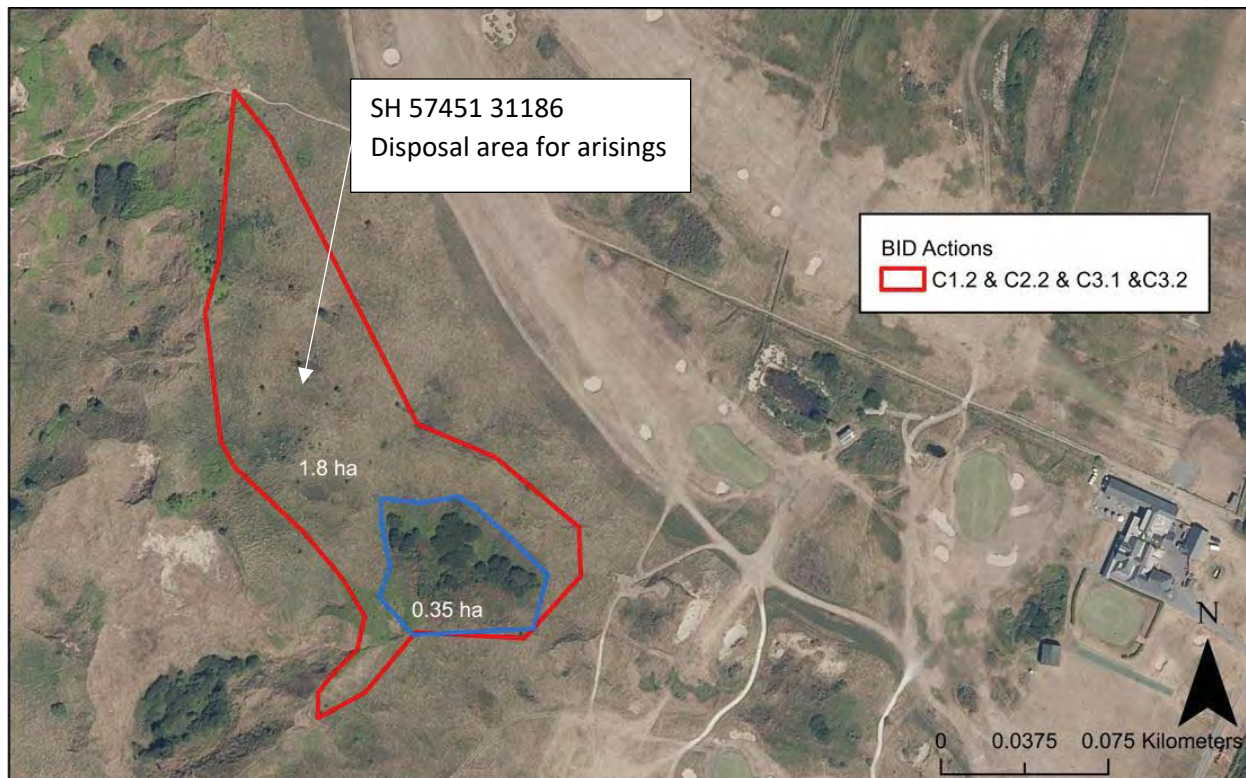
The work will take place on the dunes at the **Royal St David's Golf Club**, on the western edge of the town of Harlech, Gwynedd as shown by the red polygon in Plan 1 below. SH57867 31064



**Plan 1.** Location and access to works

The intervention area as shown in **Plan 2** below as the red polygon. The area is 1.84 ha.

The blue area is the wetter dune slack which is 0.35 ha in area.



## Plan 2: Location and access to intervention areas

Centroid grid references or Shapefile polygons for the scrub clearance area can be provided.

## Period of work

The works will be carried out during the coming winter, starting as soon as possible and to be completed no later than 30<sup>th</sup> April 2021.

The timing of work will be dependent on potential future Coronavirus restrictions. The contractor will discuss and agree timing options with the Project Officer.

**The contractor shall indicate in their tender when works can be carried out.** They shall also indicate their degree of flexibility around potential future Coronavirus restrictions.



## Intervention area description

The intervention area is undulating sand dunes with some steep faces. One area (0.35 ha) is lower lying and damp.

The vegetation is comprised of dense growth of coarse grasses, tall ruderal plants (e.g. willow herb), bramble and some young willow scrub regrowth. Older willow scrub has been cleared previously but reasonably large roots remain in situ.

The slack area is waterlogged in wet periods.

See photo below.



## Detailed Requirements

### a) Clearance of scrub and herbaceous vegetation

The contractor shall cut all scrub, grass and other and herbaceous vegetation, using heavy machinery (e.g. forage harvester) and/or hand tools (e.g. brush cutter).

The vegetation clearance will be carried out in 2 roughly 25m wide corridors running the length of the intervention. This phase should be carried out no later than **February 28<sup>th</sup> 2021**.

All arisings shall be collected and removed as described below.

This work shall be completed before scraping works begin.

### b) Turf stripping (dune reprofiling)

The contractor is required to strip the turf from the entire intervention area using a walking excavator, to expose bare sand.

The turf shall be scraped away to a depth sufficient to remove any remaining vegetation, turf, roots and any **darker (organic rich) sand**, leaving a new surface of lighter 'white' sand. This is likely to be around 30cm deep but may be more.

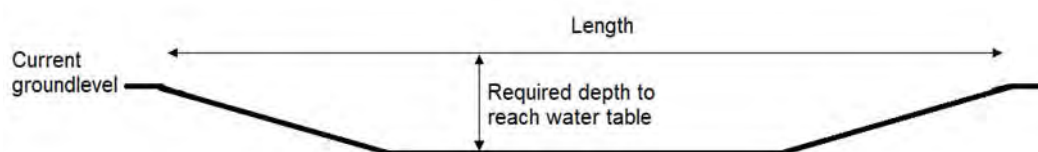
All arisings shall be removed as described below.

### c) Slack scraping

Following turf stripping described above, further excavation shall be carried out in the slack (low lying area), as shown in blue in Plan 2 above – an area of 0.34ha.

The slack will be dug deeper so that the surface is at or close to the water table so that it floods in winter and remains damp in summer. This could vary in depth from 30cm to approximately 1m. The depth will be as advised on site by the Project Officer.

The sides of the slack scrape will be graded to level the edges back to the original ground level.



All arisings shall be removed as described below.

### d) Disposal of arisings

A disposal area for arisings (a hollow) has been agreed within the intervention area as shown on Plan 2.

Arisings shall be stacked in the hollow. Vegetation first, then turf which will be inverted wherever possible. The pile shall be capped with 'clean', mineral sand.

Any further 'clean' mineral sand (not need for capping) will be deposited nearby in discreet piles on areas as indicated by the SoLIFE Project Officer as a source of blown sand or moved to an agreed location on the golf course so that it may be utilised by the maintenance team of the golf course.

Any roots, stumps and other bulky waste shall be removed from site to a registered waste disposal facility. (The contractor shall hold a Waste Transfer Licence which will be presented to the Project Officer as part of the tender.)

### **Machinery, plant and equipment**

The contractor is required to supply all equipment and plant, which should be well maintained and suitable for the proposed purpose.

We envisage that the contractor will require a walking excavator and dump truck.

Vehicles and plant shall have low ground pressure; tracked if possible. Vehicles to move arisings need to be capable of coping with steep, uneven slopes with loose substrate.

Contractors shall follow a machinery Pollution Prevention Method Statement for Machinery and Plant as shown in Annex B.

Vehicles, machinery, equipment and fuel are only to be used, parked or stored where agreed. Contractors will remove all vehicles, machinery and equipment they brought onto the site by the end of the contract.

The safety, protection and insurance of all equipment and machinery used by contractors on site must be the full responsibility of the contractors.

### **General**

As part of the tender, the contractor shall specify in writing their detailed **method statement** for carrying out the work for carrying out the work in a safe and effective manner. This shall include the type of equipment to be used.

The contractor will require a site visit prior to quoting for this work to decide on the most suitable method of works and required equipment for this work.

The SoLIFE Project Officer/Key Site Officer will advise on the detail of works on site and will undertake monitoring visits during the works.

### **Access**

Vehicle access to the site is located at grid reference: **SH 57873 31062.**

Access to the Golf Course is via a level crossing. The contractor **must** use the Railway Telecoms at the crossing before accessing the site with vehicles.

There is parking for additional vehicles in an adjacent car park.

Once on site access to the intervention area is by sandy tracks and dune grassland. This route is mostly flat, but caution will be required as it crosses the active golf course. A 4x4 vehicle will be required to gain access onto the site. Vehicles will use established tracks at all times unless specified by the Golf Course Manager. Suitable parking/turning locations near to the intervention area will be identified by the Project Officer/Golf Course Manager.

When crossing the golf course there is a risk of being struck by golf balls and damage to the golf course assets must be avoided. At times access will not be possible due to tournaments etc. Timing of works and vehicle access on site will be discussed and agreed with the Project Officer and the manager of the Golf Course prior to commencement of works. Any precautionary measures (such as the use of bog mats) will be discussed.

The intervention area itself is very undulating, with some slopes being very steep. The substrate is sand which can be loose and unstable. There are no tracks within the intervention area.

## Environmental Compliance

This site is a designated Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). The site is managed by Royal St David's Golf Club in accordance with a Natural Resources Wales Section 16 management agreement.

Site of Special Scientific Interest Assent for the works (including relevant Habitat Regulations Assessments) will be obtained prior to the contract being let.

The site has been screened for protected species by the SoLIFE team. A survey by Hill (2019) showed that Sand Lizards are present on Morfa Harlech but are confined to the frontal dunes (a narrow strip by the shoreline) which around 200m or more away from the intervention area. The intervention area habitat is overgrown dense vegetation, including Clematis with no open sand, which is considered to be unsuitable habitat for Sand Lizards. Although not recorded in the Hill survey, there is a single record from 2016, away from the frontal dunes on the golf course, around 10m away from the furthest northern point of the intervention area. This appears to be an isolated case, possibly associated with the sandy access track adjacent to the intervention area. The intervention area is therefore considered to have a low likelihood of supporting Sand Lizard.

The intervention area has been surveyed for Great Crested Newts by JBA Consulting in 2019 and found no current records of GCN. In any case the intervention area is over 400m from the nearest historic breeding pond.



Furthermore, there are no sensitive habitats within the intervention area itself.

However, there are sensitive dune grassland habitats in the surrounding areas. Contractors will be briefed on the features of ecological significance of the wider site and will be expected to avoid any practices which damage or have the potential to damage those features. Contractors will also have to avoid damage to golf course greens, tracks and fairways.

Work shall be undertaken in compliance with relevant permit/consent conditions and advice provided. Any queries regarding permits, consents/assents and other environmental constraints should be directed to the SoLIFE Project Officer.

### **Archaeology:**

Morfa Harlech is due to be screened by the Henneb/Gwynedd Archaeological Trust. The works being carried out are ground penetrating and therefore, there is a risk of disturbing archaeological features. The contractor will be briefed on the features of archaeological significance of the site and will be required to follow necessary advice. The contractor must avoid any remains of buildings, walls or other structures whilst working.

### **Standards**

All work shall be delivered to a high, professional standard. Outside of the work area the site is to be left clear of all arisings.

Any damage to golf course tracks, fairways or greens, gates, fences, tracks, culverts, pipes, cables or any other structures or fittings, must be made good to the satisfaction of the Project Officer.

### **Qualifications, Skills and Experience**

The contractor shall demonstrate relevant qualifications and professional expertise, and experience of similar work. Relevant certificates shall be presented to the SoLIFE Project Officer prior to works starting, including machinery operator certificates, chainsaw or brushcutter certificates etc.

### **Project and personnel management**

The contractor shall be responsible for the management and supervision for all of the contractor's personnel on site, including all sub-contractors used, according to good

project management practice.

The contractor must ensure that all personnel operating machinery are competent, qualified and insured to do so. In particular all chainsaw works shall be closely supervised, and the supervisor shall be appropriately qualified.

## Health and safety

Known site hazards are described on the SoLIFE Site Specific Hazard List attached to be used for reference. An Emergency Response Plan is also supplied. The contractor is required to prepare a full risk assessment, identifying potential hazards associated with the site, task and personnel involved. This risk assessment shall include a safe system of work and shall be supplied to the SoLIFE Project Officer before work commences.

The contractor is responsible for meeting all relevant health and safety regulations and industry standards.

**CDM Regulations:** The contractor is expected to work in line with the Construction Design and Management Regulations 2015. The contractor will be the Principal Contractor, as defined by the regulations.

**Golf:** The site is an active golf club. The contractor must cross the course to reach the worksite. The work site is not on a fairway but the incidence of stray balls cannot be ruled out. The contractor shall assess the risks of this hazard to minimise risk of harm.

**Other personnel on site:** Golf course staff and other contractors may be working in the area. The contractor is expected to liaise closely with the Golf Course Manager and other parties working on site concerning safety and the method of working.

**Fuel, herbicide and other chemicals:** When using herbicides or other chemicals, the contractor shall work in line with the COSHH Regulations. The contractor shall be aware of site procedures and store materials and chemicals safely and securely to prevent any spillage to land or to controlled waters. A pollution control kit must be available on site at all times. All spill/emergency incidents should be reported to NRW staff immediately.

The Pollution Prevention Method Statement shall be provided.

**PPE and First Aid:** All Personal Protective Equipment (PPE) issued by the contractor must meet Health and Safety requirements. The appropriate PPE for the operations being carried out must be worn at all times by the operating staff.

The contractor must carry an appropriate First Aid kit (BS8599) while working on site at all times.

**Welfare Provision:** NRW is committed to the Forest Industry Safety Accord (FISA) guidance on welfare, Safety Guide 806 (available via: <https://ukfisa.com/Safety/Safety-Guides/fisa-806>) All contracts must follow NRW Welfare guidance policy. Adequate welfare facilities must be sufficient depending on the number of staff and number of days on site. An assessment must be carried out by the contractor to be based on the FISA guidance on the type of welfare facilities required per job and provided with the tender. This will be followed up with consultation with the SoLIFE Project Officer.

The legal duty is to do all that is reasonably practicable. If levels of provision required cannot be provided in some respect, then an alternative must be provided and the reasons why the alternative has been chosen MUST be justified and recorded in the outline risk assessment.

Welfare facilities may be available at the Golf Club with agreement of the Manager.

**Covid-19:** All Government advice regarding Covid-19 must be followed. The contractor's method statement and risk assessment must satisfy the requirements to ensure the works can proceed in line with the current legislation in Wales, and that social distancing can be maintained.

**Underground Services:** There are no underground services in the vicinity of the work area.

**Livestock:** There are no livestock grazing in the vicinity of the work area.

**Public:** The site is an active Golf Course. Adequate care should be taken to prevent any hazard to passing players and it is vital that they do not enter the work zone. The contractor must ensure appropriate demarcation of work zones. The contractor will provide and be responsible for erecting and removing the safety signs and warning tape put up on the approaches to the work area. It is the duty of the contractor to check the presence and condition of these signs/tape on a daily basis. Contractors must stop working immediately if visitors are within the risk zone.

#### **Adverse weather:**

Weather conditions must be taken into consideration when carrying out works on site. Consider effects of flooding on access routes and the slack area.

**Unexploded ordnance (UXO):** The Morfa Harlech dunes have been subject to Detailed UXO Risk Assessment carried out by RPS UXO Consultants (document provided). The area has been assessed as being of Moderate Risk for ground penetrating processes, such as excavation. UXOs may be present on the site, either buried, partially exposed on the surface which could present a serious hazard.

Before work starts SoLIFE will arrange for the area to be scanned by a UXO consultant. Depending on the results of the scan, it may be necessary to have UXO

consultants on site as excavation takes place to act as banksmen. Further advice will be given once the scan has been completed. The contractor will need to take account of downtime should an item of UXO be identified during works.

While SoLIFE will offer UXO support, it is the contractor's responsibility to assess and manage the UXO risk and this should be included in the Risk Assessment and Safe System of Work, which the contractor is required to provide. It is also the contractor's responsibility to communicate relevant information to their personnel.

The contractor is required to refer to, and take account of, information provided in this specification (Annex A) and the following to be supplied; Detailed UXO Risk Assessment, H&S Hazard Assessment, and Emergency Response Plan. In addition, SoLIFE recommended practice to manage UXO risk on this site is also shown below for information.

The contractors are also advised to refer to, and work in line with the CIRIA guidance Unexploded ordnance (UXO) risk management guide for land-based projects (R. Bowman et al, 2019, CIRIA C785) and Unexploded Ordnance, A Guide for the Construction Industry (K. Stone et al, 2009 CIRIA C681).

The pre-commencement meeting shall take place on the first day of works to ensure that all information has been understood and risk assessments are being followed. This shall include a toolbox talk by the UXO consultant for all workers to ensure that the UXO site hazards are fully understood. The contractor should contact the SoLIFE Project Officer if they have any concerns or queries about UXO risks before work starts.

## **Biosecurity**

Disease and invasive alien species can be spread by animals, people, vehicles and equipment. By using biosecurity measures, the risk of spreading alien species and/or disease can be reduced. The contractor shall be aware of and work in accordance with standard good practice.

The contractor shall include proposed biosecurity management measures (method statement) with the tender.

All vehicles, machinery and equipment should be thoroughly cleaned to remove any soil, plant material or other debris before being brought onto the site.

Further information on biosecurity can be found in Biosecurity Awareness and Invasive Species Session Notes, North Wales Wildlife Trust (DINNS Project) on behalf of NRW (2018) (to be supplied).

## **Quoting and pricing**

Please quote alternative costs as follows:

The bidder is asked to provide a binding quote for the specified work, broken down as shown below: Please also break down by a) Vegetation clearance b) Scraping/excavation

- Number of days at the day rate specified in the framework. Specify number of staff on site.
- Machinery and plant hire costs (if extra)
- Waste disposal costs
- Welfare unit – if required
- Other costs
- Total

Please note that this contract requires a **binding fixed quote, not a variable day rate quote**.

Before tendering, contractors should visit the site and satisfy themselves as to the full extent and character of the work and conditions affecting the contract and quote for the whole of the works necessary to complete it to the intention of the specification. Contact should be made with the Project Officer.

Any measurements in this specification are approximate. Contractors must take their own site measurements and report any discrepancy, as no claims for extra payments will be entertained for short measurements after the contract has been placed.

## Terms and conditions

The contract shall be let in line with the terms and conditions of the Walking Excavator Framework.

**The contactor must include the following reference on all paperwork relating to the contract including quotations and invoices:**

**Sands of LIFE: LIFE 17 NAT/UK/000023**

## Ordering and invoicing arrangements

If NRW/SoLIFE wishes to make an order/contract with the supplier, they will be notified in writing and sent an official order number. The supplier must not start work before receipt of the order number.

Invoices can only be paid on full completion of works. SoLIFE will require evidence of completion of works in the form of an email from the contractor confirming completion with an attached electronic photograph of the completed works.

***PLEASE SEND ALL INVOICES TO:***

Email: [SoLIFE@cyfoethnaturiolcymru.gov.uk](mailto:SoLIFE@cyfoethnaturiolcymru.gov.uk) .

Invoices can only be paid if they contain the SoLIFE reference: **Sands of LIFE: LIFE 17 NAT/UK/000023** and the order number.

## Key Performance Indicators

The key performance indicators for the contract are as follows:

- 1) Deliver work on time as per the timetable described in this specification.
- 2) Deliver all work to the quality standards described in this specification.
- 3) Health and safety – full compliance with relevant legislation and standards laid out in this specification (risk assessments; site safety rules; lone working arrangements; PPE, welfare, first aid requirements etc.)
- 4) Environmental - full compliance with relevant legislation and standards laid out in this specification.

## Supporting Information

### Annexes

**Annex A:** Sands of LIFE UXO information

**Annex B:** Pollution Prevention Method Statement for Machinery and Plant

**Annex C:** Conditions of Assent no: A00 *“To be confirmed”*

### PDF Email Attachments

- SoLIFE Site Specific Hazard List
- Emergency Response Plan
  
- FISA 806 Welfare Guide
- FISA Safety Bulletin - Welfare and Covid 19
- Welfare Standards for those working on the WGWE
- Contract Specific Welfare Assessment
  
- RPS- Preliminary UXO Risk Assessment
- Biosecurity Awareness and Invasive Species Session Notes



**The contractor must acknowledge, via email, that they have received the following PDF attachments sent by Leigh Denyer, Sands of LIFE Project Officer.**

## Appendix A: Dealing with UXO incidents

### If a UXO is unearthed or identified as part of Sands of LIFE practical work contract

If you discover an **unidentified metal object** on the work site, then:

- Stop work.
- Do not move, handle or disturb the object.
- Warn others and tell them to move away.
- Inform the site supervisor.
- Move to a safe area/assembly area at least 100m away, ideally out of line of sight, behind sand dunes or trees. Follow a safe route and do not walk past the object unless absolutely necessary.
- Assume that the object is UXO until advised otherwise. Even if the site is deemed low risk or has a clearance certificate, UXOs may still be present.
- Be aware that the UXO could detonate even if it is old and damaged. Assume the object is dangerous.

Site supervisors or SoLIFE Project Officer (if no UXO specialist on site), in addition should:

- Ensure team and members of public are moved to safe place/assembly area, as described above.
- Without moving it, try to identify if the object is a UXO. Photograph the object if possible.
- If it appears to be a UXO, or you are uncertain then place a marker near the object in a position that can be seen from a safe distance. Use a piece of equipment, or clothing (do not drive in a stake or pole) and note the location either on GPS equipment, map or using a detailed grid reference.
- If the object is in the bucket of an excavator etc do not tip it out. Lower the bucket to the ground unless the object is in danger of falling out. Switch off the engine and leave the keys in the ignition.
- Retreat to the safe area.
- Report the incident to the Site Manager and/or SoLIFE Project Officer by the quickest means possible – see Emergency Plan.
- Report the incident to the Police on 101 or 999.
- Erect a cordon around the UXO to prevent any unauthorised access. This cordon should be manned to prevent unauthorised access to the location.
- Wait for further instructions from Police or Site Manager/SoLIFE Project Officer.
- If possible, meet the police at the access point, car park etc and show them the location of the item.

## **Annex B: Pollution Prevention Method Statement for Machinery and Plant**

The contractor will be required to follow the following Pollution Prevention Method Statement.

### Prior to Start of Works

- All equipment, materials, machinery and PPE used will be in a clean condition prior to their arrival on site, and upon removal from site, to minimise risk of introducing pollution and non-native species into the environment.
- Access routes will be driven beforehand with the Key Site Officer to ensure the most suitable route is used.
- A designated re-fuelling area will be chosen on an area of hardstanding.

### During Works

- Use of low ground pressure machinery to reduce ground damage.
- Trained and certified operators will use the machines in a safe and efficient manner reducing emissions and to minimise accidents.
- All operators must check the machines daily. They must also visually check the machines at regular intervals during the working day, in particular looking out for oil leaks.
- Correct and secure storage facilities (including bunding) will be present on/by every machine to contain and prevent the release of fuel, oils and chemicals into the sensitive environment, associated with the plant, refuelling and construction equipment.
- Each vehicle should carry a pollution spill kit at all times and operators must be familiar with its use. This includes welfare units.
- Care should be taken when refuelling to avoid spillage of fuel or oil into drains and water courses.
- Use of plant nappies when plant is not in use.
- When not in use, plant should be stored off the dunes/ on hard standing, where possible.
- Oil drums, grease containers and chemical containers must not be left on site whether full or empty.
- All incidents must be reported to the SoLIFE Project Officer in the first instance, as soon as practicable.

### Completion of Works

All equipment, temporary structures, access tracks, waste and/or debris associated with the works will be removed on completion of the works.

## **APPENDIX II**

### **Gwynedd Archaeological Trust Watching Brief pro-forma**

YMDDIRIEDOLAETH ARCHAEOLEGOL GWYNEDD ARCHAEOLOGICAL TRUST		
WATCHING BRIEF DAY RECORD		Date
Project name	Project number	Compiler
Location		
Description		
Times of travelling and on-site		
Drawn record details		
Photographic record details		

## **APPENDIX III**

### **Gwynedd Archaeological Trust Photographic metadata pro-forma**



# Digital Photographic Record

Include main context numbers for each shot, drawing numbers for sections and any other relevant numbers for cross referencing. Delete any unwanted photos **immediately** from the camera. Regularly upload photographs to computer.

[illegible]

## **APPENDIX IV**

### **Gwynedd Archaeological Trust Selection Strategy pro-forma**

# [Project name and identifier] [Date and version] Selection Strategy

## Project Information

### Project Management

Project Manager		
Archaeological Archive Manager		
Organisation		
<b>Stakeholders</b>		<b>Date Contacted</b>
Collecting Institution(s)		
Project Lead / Project Assurance		
Landowner / Developer		
Other		

### Resources

#### Resources required

Describe the resources required to implement this Selection Strategy, particularly if unusual resources are required.

--

### Context

Describe below the context of this Selection Strategy. You should refer to:

- The aims and objectives of the project;
- Local Authority guidance (including the brief);
- Research Frameworks;
- The repository collection development policy and/or deposition policy;
- Material-specific guidance documents.

**Note:** This section may be copied from your Project Design/WSI to ensure all Stakeholders receive this context information.

--

# 1 – Digital Data

## Stakeholders

Name the individual(s) responsible for the Digital Data Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Collections Curator).

## Selection

### Location of Data Management Plan (DMP)

Selection of digital data elements should be considered in your project's DMP. For the purpose of the Selection Strategy, you can either copy the selection section of your DMP below, or attach it as an appendix to this document. Please indicate here if the DMP is attached.

The selection strategy in your DMP should:

- 1.1 Define what digital data will be selected for inclusion in the archaeological archive, how this will be done, and why. Do not forget to consider that specialists may have digital data that should be included in the archaeological archive.
- 1.2 Identify the selection review points during the project (i.e. project planning, data gathering, analysis and reporting and archive compilation).
- 1.3 Reference all relevant standards, policies or guidelines (e.g. digital repository deposition requirements) and specialist advice sought.
- 1.4 Identify any selection decisions that differ from standard guidelines and explain why.

## De-Selected Digital Data

The procedure for dealing with De-selected digital data and what specialist advice informed this process should be recorded in your DMP. Please copy this information here or attach your DMP as an appendix to this document.

## Amendments

Detail any amendments to the above selection strategy here.

Date	Amendment	Rationale	Stakeholders

## 2 – Documents

### Stakeholders

Name the individual(s) responsible for the Documents Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Repository Representative).

### Selection

Describe your Selection Strategy for the Documents elements of the archaeological archive. To do this you must:

- 2.1 Define which documents will be selected for inclusion in the archaeological archive, how this will be done, and why. Do not forget to consider that specialists may have documents that should be included in the archaeological archive.
- 2.2 Identify the selection review points during the project (e.g. project planning, data gathering, analysis and reporting and archive compilation).
- 2.3 Reference all relevant standards, policies or guidelines (e.g. digital repository deposition requirements) and specialist advice sought.
- 2.4 Identify any selection decisions that differ from standard guidelines and explain why.

### De-Selected Documents

Describe the procedure for dealing with De-selected material and what specialist advice has informed this procedure.

### Amendments

Detail any amendments to the above selection strategy here.

Date	Amendment	Rationale	Stakeholders



## 3 – Materials

**Note:** This step should be completed for each material component of the archaeological archive. Copy this table for the various materials as required, providing the 'Material Type' and a section identifier (eg. '3.1') for each.

**Material type**

**Section 3.**

### Stakeholders

Name the individual(s) responsible for the Materials Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Repository Representative).

### Selection

Describe your Selection Strategy for each material type and or object type. To do this you must:

- 3.1 State the Selection Strategy you are applying to each category of material, how this will be done, and why.
- 3.2 Identify the selection review points during the project (e.g. project planning, data gathering, analysis and reporting and archive compilation).
- 3.3 Reference all relevant standards, policies or guidelines (e.g. thematic, period, and regional, Research Frameworks, repository deposition policies) and specialist advice sought.
- 3.4 Identify any selection decisions that differ from standard guidelines and explain why.

The [Materials Selection Template](#) may be useful in structuring this section.

### Uncollected Material

If you are practising selection in the field, describe the process that will be applied. To do this you must:

- Detail how you will characterise, quantify and record all uncollected material on site.
- Explain how you will dispose of, or re-distribute, uncollected material.

### De-Selected Material

Describe what you will do with the de-selected material. All processed material should have been adequately recorded before de-selection.

## Amendments

Detail any amendments to the above selection strategy here.

Date	Amendment	Rationale	Stakeholders

## Materials Selection Template

This table may be inserted into Section 3 of the main [Selection Strategy Template](#) to help present differing selection strategies for different material types

Find Type	Selection Strategy	Stakeholders	Review Points

## **APPENDIX II**

### **Gwynedd Archaeological Trust photographic metadata**

PHOTO RECORD NUMBER*	DESCRIPTION*	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	PLATES
G2687_001	Cleaned section of the field boundary wall	WNW	1x1m	Stuart Reilly	16/04/2021	1
G2687_002	North facing elevation of field boundary wall	N	1x1m	Stuart Reilly	16/04/2021	2
G2687_003	Close-up of north face of field boundary wall	N	1x1m	Stuart Reilly	16/04/2021	
G2687_004	Close-up of north face of field boundary wall	N	1x1m	Stuart Reilly	16/04/2021	3
G2687_005	Cleaned section of field boundary wall	ESE	1x1m	Stuart Reilly	16/04/2021	
G2687_006	Cleaned section of field boundary wall	ESE	1x1m	Stuart Reilly	16/04/2021	4
G2687_007	Location of field boundary wall	NNW	1x1m	Stuart Reilly	16/04/2021	5
G2687_008	Location of field boundary wall as it turns northwest	NW	1x1m	Stuart Reilly	16/04/2021	
G2687_009	General location shot of NRW work area and field boundary wall	NW	Not used	Stuart Reilly	16/04/2021	
G2687_010	Location of field boundary wall	E	1x1m	Stuart Reilly	16/04/2021	6
G2687_011	Eastern terminal of field boundary wall	E	1x1m	Stuart Reilly	16/04/2021	7
G2687_012	Disturbed eastern terminal of field boundary wall	NE	1x1m	Stuart Reilly	16/04/2021	8

## **APPENDIX III**

### **Gwynedd Archaeological Trust Selection Strategy**



# G2687\_Morfa\_Harlech

## 08/07/2021 v1.0

### Selection Strategy

#### Project Information

##### Project Management

<b>Project Manager</b>	John Roberts <a href="mailto:john.roberts@heneb.co.uk">john.roberts@heneb.co.uk</a>	
<b>Archaeological Archive Manager</b>	John Roberts <a href="mailto:john.roberts@heneb.co.uk">john.roberts@heneb.co.uk</a>	
<b>Organisation</b>	Gwynedd Archaeological Trust	
Stakeholders		Date Contacted
<b>Collecting Institution(s)</b>	GAT Historic Environment Record	14/04/2021
	RCAHMW	On completion of Project Archive
<b>Project Lead / Project Assurance</b>	Andrew Davidson, Chief Archaeologist, Gwynedd Archaeological Trust	14/04/2021
<b>Landowner / Developer</b>	NRW	14/04/2021
<b>Other</b>	n/a	n/a

##### Resources

<b>Resources required</b> Describe the resources required to implement this Selection Strategy, particularly if unusual resources are required.	No unusual resources required outside of GAT normal operating equipment and personnel.
--	--

##### Context

Describe below the context of this Selection Strategy. You should refer to:

- The aims and objectives of the project;
- Local Authority guidance (including the brief);
- Research Frameworks;
- The repository collection development policy and/or deposition policy;

- Material-specific guidance documents.

**Note:** This section may be copied from your Project Design/WSI to ensure all Stakeholders receive this context information.

The full aims and objectives of this project are detailed in the project specific WSI.

Gwynedd Archaeological Trust was commissioned by Natural Resources Wales (NRW) to undertake an archaeological watching brief during conservation works for the *Sands of LIFE (SoLIFE) (LIFE17 NAT/UK/000023)* conservation project at Morfa Harlech, Gwynedd (NGR SH57453118; postcode LL46 2NX; WSI Figure 01). The Sands of LIFE project is being led by NRW and supported by the EU LIFE fund and the Welsh Government, with the aim to restore threatened sand dune sites across Wales. As detailed in NRW document *Twyni Byw - Sands of LIFE (SoLIFE) Specification* (29 November 2020) the lack of dynamic processes and dune over-stabilisation has had a negative impact on sand dune habitats and species across Wales and many dunes are now dominated by an overgrowth of coarse vegetation. The dune slacks are hollows within the dunes that form damp habitats, often with standing water in the winter, which support species-rich plant communities. Dune slacks often become overgrown and many have suffered from drying out with the subsequent loss of their diverse wildlife. Scraping and lowering of the sand surface, removes over-growth and reinstates the wetter conditions, which allows the characteristic plant communities to re-establish. The work at Morfa Harlech comprised a 1.8ha intervention area and included stripping of dune turf and scraping of dune slack on land owned by Royal St David's Golf Course. The archaeological watching brief was completed on the 16<sup>th</sup> of April 2021.

Gwynedd Archaeological Trust. 2021. *Morfa Harlech: Written Scheme of Investigation*. Project G2687.

## 1 – Digital Data

### Stakeholders

Name the individual(s) responsible for the Digital Data Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Collections Curator).

John Roberts (GAT Principal Archaeologist)  
Stuart Reilly (GAT Project Archaeologist)

### Selection

#### Location of Data Management Plan (DMP)

Selection of digital data elements should be considered in your project's DMP. For the purpose of the Selection Strategy, you can either copy the selection section of your DMP below, or attach it as an appendix to this document. Please indicate here if the DMP is attached.

All digital data has been collected and stored in line with the Gwynedd Archaeological Trust (GAT) Data Management Plan located on GAT's servers (available on request).

The selection strategy in your DMP should:

- 1.1 Define what digital data will be selected for inclusion in the archaeological archive, how this will be done, and why. Do not forget to consider that specialists may have digital data that should be included in the archaeological archive.
- 1.2 Identify the selection review points during the project (i.e. project planning, data gathering, analysis and reporting and archive compilation).
- 1.3 Reference all relevant standards, policies or guidelines (e.g. digital repository deposition requirements) and specialist advice sought.
- 1.4 Identify any selection decisions that differ from standard guidelines and explain why.

Archiving was completed based on following task list;

- Pro-formas: all cross referenced and scanned for digital archiving;
- Photographic Metadata: cross-referenced with all pro-formas and completed in *Microsoft Excel*.

This data was used as the basis for the physical and digital dataset archives and to compile the project report.

The physical paper archive has been stored in a designated project folder and the location confirmed in the Trust project database; the digital dataset has been stored on a dedicated Trust server, with the location confirmed in the Trust project database via a specific hyperlink.

External datasets for the regional HER and RCAHMW have been prepared and submitted.

Archiving was undertaken in accordance with the following standards and guidance:

- *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs) Version 1.1* (The Welsh Archaeological Trusts, 2018);
- *Guidelines for digital archives* (Royal Commission on Ancient and Historic Monuments of Wales, 2015);
- *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (Chartered Institute for Archaeologists, 2020); and
- *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (Chartered Institute for Archaeologists, 2020).

A selection review point was completed during processing of the working project archive and again during final project archiving. There are no selection decisions that differ from standard guidelines.

## De-Selected Digital Data

The procedure for dealing with De-selected digital data and what specialist advice informed this process should be recorded in your DMP. Please copy this information here or attach your DMP as an appendix to this document.

No de-selected digital data.

## 2 – Documents

### Stakeholders

Name the individual(s) responsible for the Documents Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Repository Representative).

John Roberts – Principal Archaeologist, Gwynedd Archaeological Trust;  
Sean Derby – Historic Environment Record, Gwynedd Archaeological Trust;  
Gareth Edwards, *Head of Knowledge and Understanding, RCAHMW*

### Selection

Describe your Selection Strategy for the Documents elements of the archaeological archive. To do this you must:

- 2.1 Define which documents will be selected for inclusion in the archaeological archive, how this will be done, and why. Do not forget to consider that specialists may have documents that should be included in the archaeological archive.
- 2.2 Identify the selection review points during the project (e.g. project planning, data gathering, analysis and reporting and archive compilation).
- 2.3 Reference all relevant standards, policies or guidelines (e.g. digital repository deposition requirements) and specialist advice sought.
- 2.4 Identify any selection decisions that differ from standard guidelines and explain why.

- A digital report has been provided to the regional Historic Environment Record; along with a digital dataset comprising an Event PRN summary. The report and dataset have been submitted in accordance with the required standards set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (Version 1.1); and
- A digital report and digital archive dataset has been provided to Royal Commission on Ancient and Historic Monuments, Wales (final report only), in accordance with the *RCAHMW Guidelines for Digital Archives Version 1*. The dataset was prepared in the format required by RCAHMW and included:
  - Photographic metadata (Microsoft Access);
  - Photographic archive (TIFF format);
  - Project Information form (Excel);
  - File Information form (Excel) – Microsoft Word report text final;
  - File Information form (Excel) – Photographic metadata (general);
  - File Information form (Excel) – Adobe PDF report final; and
  - File Information form (Excel) - Photographic metadata (detail).

A selection review point was completed during processing of the working project archive and again during final project archiving. There are no selection decisions that differ from standard guidelines.

### De-Selected Documents

Describe the procedure for dealing with De-selected material and what specialist advice has informed this procedure.

Material de-selected from inclusion in the preserved archive are duplicates and reproductions created during the project. De-selected material has been retained to supplement GAT's research files or recycled.



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