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AN ARCHAEOLOGICAL MAP REGRESSION FOR FLOOD DEFENCES AT YNYS HIR RSPB RESERVE, CEREDIGION

Gan / By

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CONTENTS

SUMMARY	1
INTRODUCTION	2
THE ARCHAEOLOGICAL RESOURCE	3
CONCLUSION and RECOMMENDATIONS	5
SOURCES	6

ILLUSTRATIONS

- Figure 1: Location Map
- Figure 2: Feature reference map
- Figure 3: 1837 OS map
- Figure 4: 1848 tithe map
- Figure 5: 1st edition Ordnance Survey map 1887
- Figure 6: 2nd edition Ordnance Survey map 1905

PHOTOGRAPHS

- Plate 1: 1992 AP of flood defences
- Plate 2: Lidar Image

AN ARCHAEOLOGICAL MAP REGRESSION OF THE FLOOD DEFENCES AT THE YNYS HIR RSPB RESERVE, CEREDIGION

Summary

The Environment Agency commissioned Dyfed Archaeological Trust Field services to undertake a desk-based assessment of the archaeological implications of the proposed removal of part of the existing flood defences on the Ynys Hir RSPB Reserve, Ceredigion, due to the proximity of the scheduled medieval motte site Tomen Las (PRN 4031).

Documentary and cartographic evidence for the flood defences to the east and west of the Motte site seems to indicate that while most of the flood defences in the area were constructed some time after 1834, a field boundary and possible flood defence to the west of Tomen Las, may have earlier origins.

INTRODUCTION

Project outline

Due to the proximity of a scheduled medieval motte site PRN 4031 (NGR SN68729687), the Senior Archaeologist of the Environment Agency commissioned Dyfed Archaeological Trust Field services to undertake a map regression study of the area in question, to assess the archaeological implications of the proposed removal of existing flood defences on the Ynys Hir RSPB Reserve, Ceredigion.

Methodology

The study consisted of the examination of available mapping and published works held in the Historic Environment Record¹ (HER), the Ceredigion Archives, the Royal Commission and the National Library of Wales. The results are presented as a map regression to identify the extent and character of the archaeological resource, to assess the potential impacts of the scheme on that resource and, to outline possible options to mitigate those impacts. The undertaking of this study does not preclude the possibility that further archaeological input may be required prior to, or during, execution of the proposed scheme.

Abbreviations used in this report

All sites recorded on the county Historic Environment Record (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Scheduled Ancient Monuments are referred to as SAMs. References to cartographic and documentary evidence and published sources will be given in brackets throughout the text, with full details listed in the sources section at the rear of the report.

¹ Held and managed by Dyfed Archaeological Trust, The Shire Hall, Llandeilo.

THE ARCHAEOLOGICAL RESOURCE

Known Archaeological Sites

PRN 4031 TOMEN LAS (NGR SN68729687)

The site of Tomen Las consists of a scheduled medieval defended motte (SAM no CD100). The motte is understood to have been built in 1156 by the Lord Rhys, who was defending his northern border against Owain of Gwynedd who at the time was threatening to invade Ceredigion. The threatened invasion never occurred, however, two years later, the Norman Rodger Declare (the Earl of Hertford) took the castle by force and subsequently rebuilt it. It is possible that the Lord Rhys then retook the castle the same year. This is the last time the castle is recorded in history (Rees, 1992,p178).

Cartographic Resources

Ordnance Survey 1833 & 1834 Plan 336

The 1833 to 1834 map (not included in this report for copyright reasons) does not show either the flood defences or the east-west field boundary. This need not, however, be taken as proof that the flood defences were not present.

Ordnance Survey 1837, old series

The 1837 OS map (Figure 2) appears to use a double line to depict what are probably flood defences (A) to the east of Afon Einion. A similar line convention is used to depict the east-west boundary (C) west of the motte. This may suggest that all the fields and flood defences in this area were established between 1834 and 1837, possibly as a result of the parliamentary enclosures Act. Later map evidence (discussed below) however, may suggest that boundary (C) is possibly of earlier origin. Flood defences B and D are not depicted.

Llanvihangel Geneurglyn Tithe map and apportionment of 1848

On the tithe map of 1848 (Figure 3) the field containing the motte (field number 466) and the motte itself (labelled as field 467) are listed in the apportionment as owned by a Mr John Maurice Davies and occupied by Mr Thomas Davies. Field 466 is described as pasture. The motte is described as being a garden. The small enclosure to the immediate east of the motte named Pant Glas (field 395) is also described as pasture, but resembles a mooring inlet on the map. Field 469 situated to the north of field boundary (C) is recorded as being owned by a Mr Matthew James Williams and occupied by Mr Thomas Davies. The field is described as pasture and is named 'Cae garw' ('rough or bumpy field').

Flood defences (A) on the eastern side of the Afon Einion (in field 396) are indicated on the tithe map, but those on the western side (B) are not depicted. It is possible (although perhaps unlikely), that flood defences (B) could have been present by this time, but were not depicted since they did not represent a land ownership boundary.

The east-west boundary (C) to the west of the motte is only depicted as a field boundary. Also depicted, close to either end of this boundary are small rectangles of uncertain significance, but possibly sheepfolds. The present day flood defences (E) are not depicted. Flood defences (D) are not depicted.

1st and 2nd edition OS maps of 1887 and 1905

The flood defences (B) running from the motte southwards along the west bank of Afon Einion, are first represented on the 1st and 2nd edition OS maps dated 1887 and 1905 respectively (Figure's 4 & 5). Although the boundary to the west

of the motte (C) is not represented as a flood defence, the maps clearly indicate a difference in land use or land management. This may suggest that the boundary was of sufficient strength, or the land to the south sufficiently elevated, to prevent inundation.

That flood defence (D) (also depicted for the first time) run northwest from boundary (C), may again suggest that boundary (C) did not need strengthening against sea inundation.

The words 'breakwater' visible to the north of the motte refer to the groyne on the shore immediately to the east.

4th edition OS map of 1953

The 1953 OS map 4th edition (not presented in this report) depicts the east-west boundary (C), but flood defence (E) is not depicted.

Aerial photographic evidence

RAF Vertical AP (1946)

In this photograph, boundary (C) is visible, but does not appear to be a well-defined earthwork in comparison to the other flood defences in the area that are discernable in the same image. Although this lack of clarity may be due to visibility conditions, or image quality, it may also suggest that the boundary is different in form and style to the other flood defences (or is not a flood defence).

Meridian AP (1955)

In this photograph, earthwork flood defence (E) is clearly visible for the first time. The air photographs coupled with the map evidence therefore suggests that the barrier was constructed between 1953 and 1955. It is unclear, however, whether field boundary (C) has been incorporated into flood defence (E) or not.

Oblique aerial Photograph (1992)

In this photograph (Plate 1) flood defence (B) and (E) can be seen clearly. There is no evidence of boundary (C), suggesting that it has indeed been incorporated into flood defence (E).

Lidar images

A Lidar image (Plate 2) shows that flood defence (E) turns southeast at its eastern end, whereas boundary (C) is mapped as continuing eastwards. The difference in the appearance of boundary (C) and flood defence (E) suggests that flood defence (E) may incorporate boundary (C).

CONCLUSION and RECOMMENDATIONS

From the available evidence it appears that the field boundaries and flood defences in the Ynys Hir RSPB reserve were constructed at different times. The flood defences on the east side of Afon Einion (A) probably date from before 1837 and may be part of a larger land reclamation scheme at the time of the parliamentary enclosures. The defences on the west side of Afon Einion (B) may have been constructed later, at some time between 1837 and 1887 (along with those further to the northwest (D)).

The origins of boundary (C) are less clear. Although apparently depicted as a flood defence in 1837, it is subsequently only depicted as a field boundary. It is clear, however, from the map depictions, and the construction of flood defence (D) that boundary (C) acted as a flood defence throughout. It may be that this boundary has earlier origins than the others in the area, possibly even dating from when Tomen Las motte was constructed.

Flood defence (E) appears to have been constructed between 1953 and 1955. It appears to incorporate, or possibly to have re-modelled or replaced, boundary (C). At its east end (E) turns southeast, diverting from the original course of boundary (C).

The proposal to breach the flood defences in the Ynys Hir RSPB reserve, may require the removal of significant parts or portions of the existing features (B) and (E). From an archaeological perspective, although the existing defences cannot with any certainty be demonstrated to be of great significance or antiquity, it would be preferable to retain as great a proportion of the features as possible as historic landscape features, reflecting the history of coastal land-use in the region.

If it is possible to breach only one of the defences, then, considering the uncertainty surrounding the possible antiquity of flood defences (E and C), it would be preferable to remove parts of defences (B), leaving defences (E) intact.

Although beyond the scope of this study, it should be noted that the potential for unrecorded below-ground archaeological features that pre-date the construction of the flood defences remains unknown. Changes in vegetation and soil conditions resulting from the change in land management might be considered to have a significant (but not necessarily negative) effect on any remains that might exist in the area concerned.

To mitigate the potential effects of the proposal, it is suggested that an archaeological watching brief could be undertaken to record a representative cross section through the defences if they are breached.

SOURCES

Database

The Regional Historic Environment Record, housed with Dyfed Archaeological Trust in Llandeilo, Carmarthenshire.

Cartographic

Llanvihangel Geneurglyn Tithe Map and Apportionment 1848

Ordnance Survey 1833 & 1834 Plan 336 (two inches to 1 mile)

Ordnance Survey 1837, the old series Survey map of England and Wales (1 inch to the mile)

Ordnance Survey Aberystwyth & Machynlleth sheet 135 1:50,000

Ordnance Survey, 1964, Quarter Sheet SN69NE 1:10,560

Ordnance Survey, 1887, Cardiganshire Sheet II NW 1st edition 1:10,560

Ordnance Survey, 1905, Cardiganshire Sheet II NW 2nd edition 1:10,560

Ordnance Survey, 1953, Cardiganshire Sheet II NW 4th edition 1:10,560

Published Sources

Rees, S, 1992. *A Guide to Ancient and Historic Wales. Dyfed*. London: HMSO

Jones, 2004. *Historic Cardiganshire Homes and Their Families*. Brawdy books

Aerial Photographs

Vertical

RAF Vertical APs 106G/1450 frame 3159 (1946)

Meridian AP 1955 frame unknown (1955)

Oblique

Musson. 1992. AP92-043.42

Internet Sources

www.geiriadur.net/atebion.php?prefLang=en

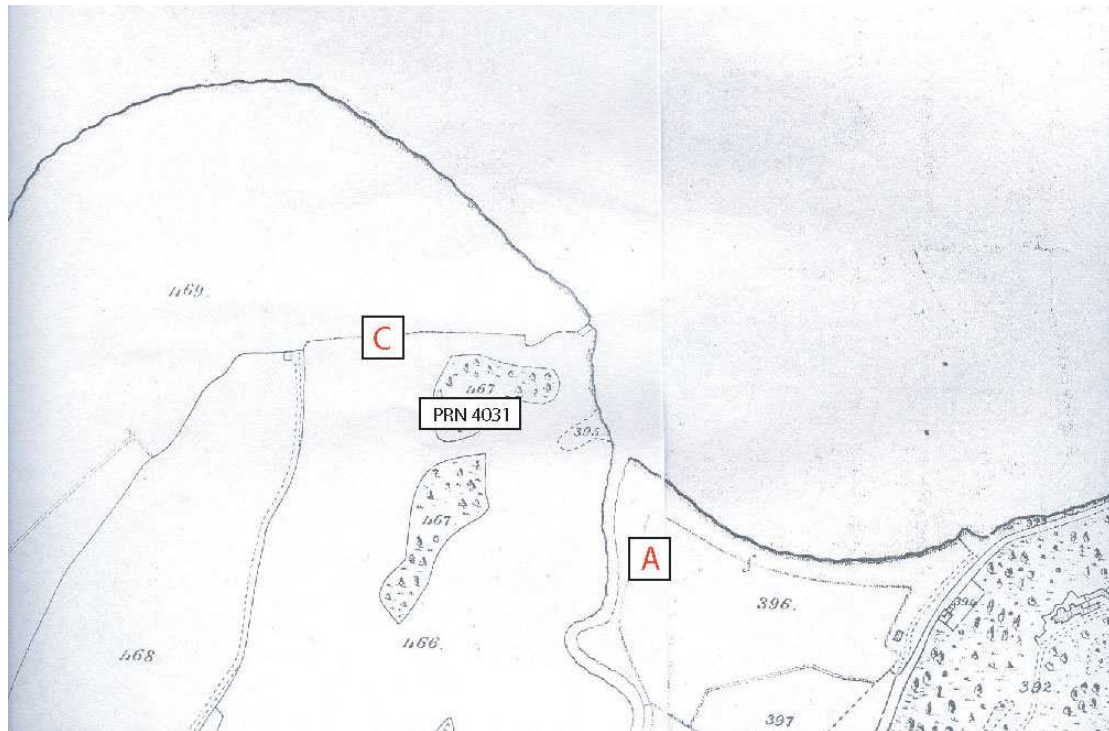


Figure 3: Tithe map dated 28th of March 1848 Showing Ynys Hir reserve.

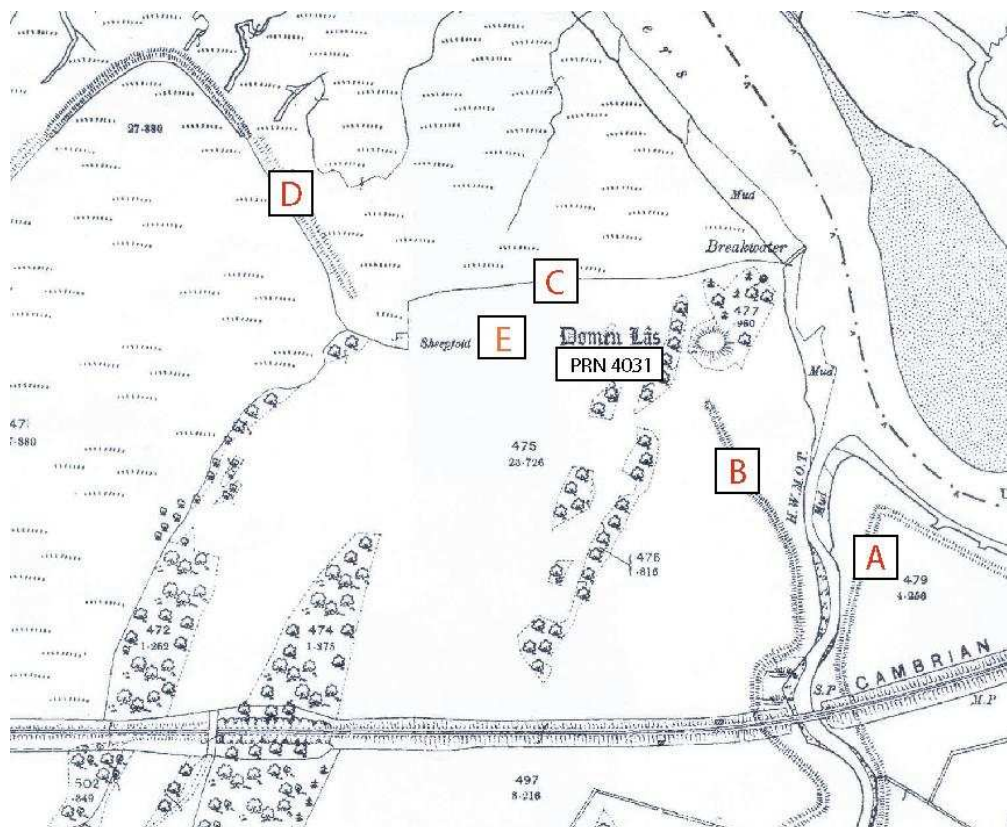


Figure 4: Ordnance Survey 1887 Cardiganshire Sheet II NW 1st edition 1:10560, extract showing Ynys Hir reserve.

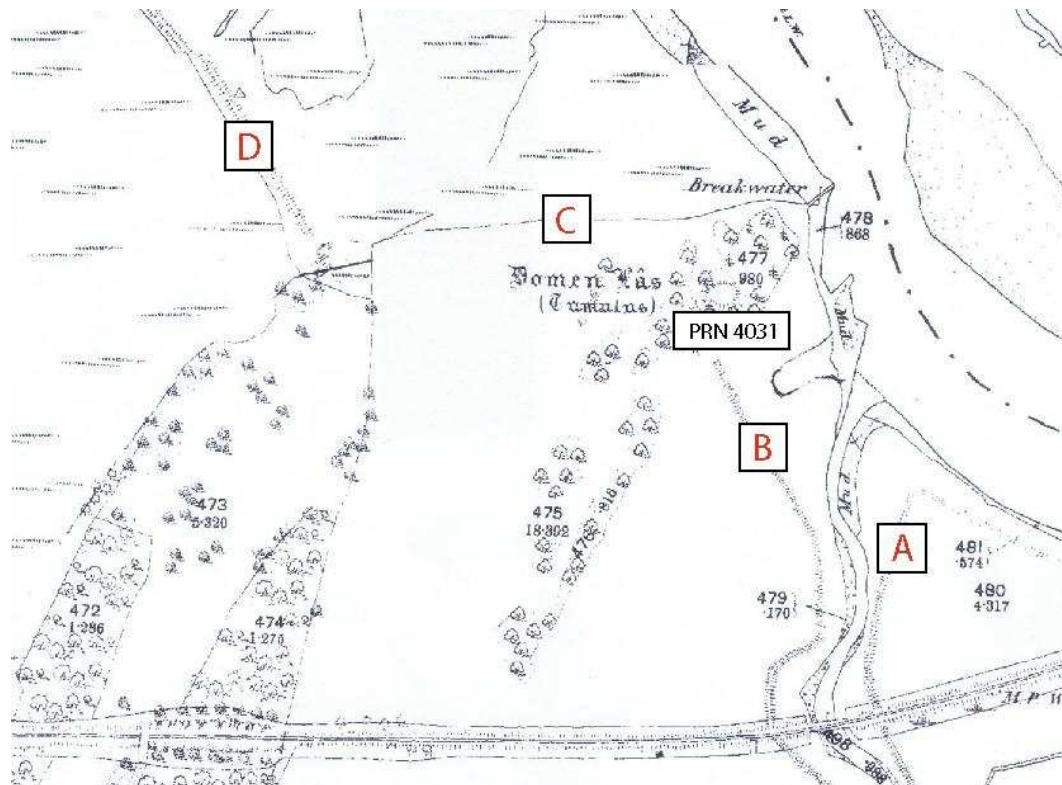


Figure 5: Ordnance Survey 1905 Cardiganshire Sheet II NW 2nd edition 1:10560 extract showing Ynys Hir reserve.



Plate 1: Oblique aerial photo of Tomen Las, taken 1992 showing flood defences (E/C) at bottom right and (B) at top.

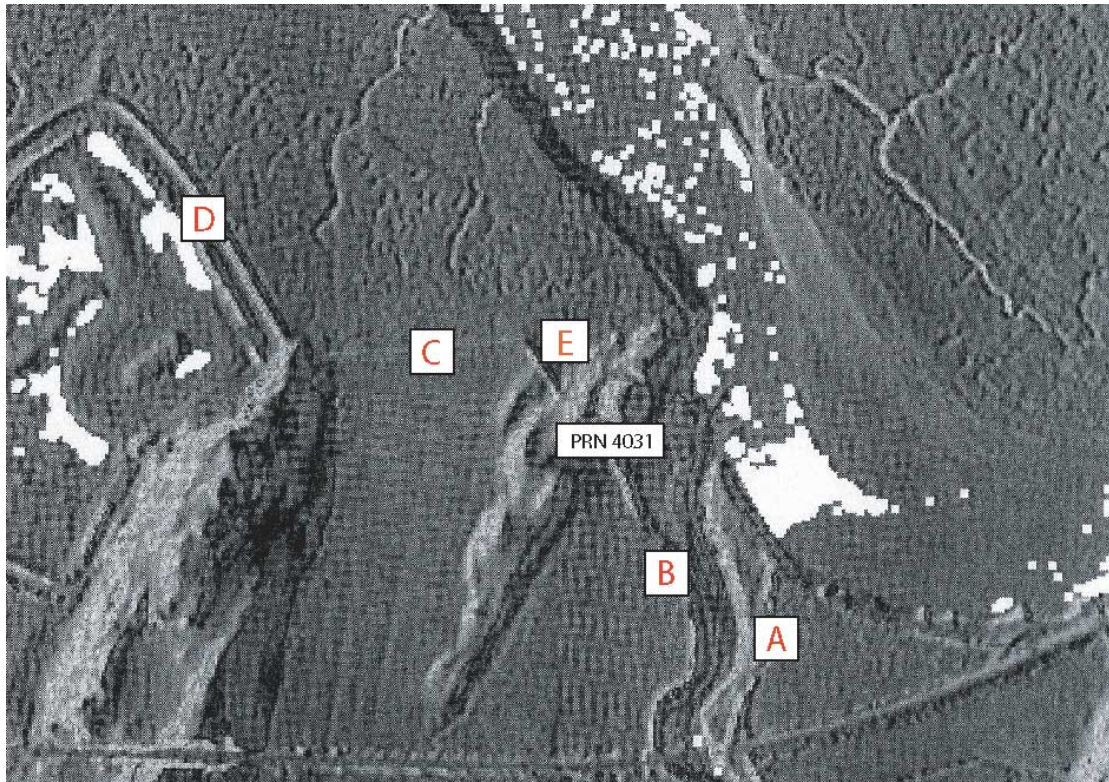


Plate 2: Detail from Lidar image provided by the Environment Agency

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Andrew Shobbrook

Swydd / Position: Archaeologist

Llofnod / Signature Date

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith
This report has been checked and approved by

Duncan Schlee

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on behalf of Dyfed Archaeological Trust Ltd.

Swydd / Position: Project Manager

Llofnod / Signature Date

Yn unol â'n nôd i roddi gwasanaeth o ansawdd uchel, croesawn unrhyw sylwadau
sydd gennych ar gynnwys neu strwythur yr adroddiad hwn

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