NEFYN WASTE WATER TREATMENT SCHEME
(REVISED ROUTE)

ARCHAEOLOGICAL ASSESSMENT:

TRIAL EXCAVATION REPORT

G1760

Report No. 509

Prepared for
Symonds Group Ltd

November 2003
by
D. Hopewell

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Gwynedd Archaeological Trust
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ARCHAEOLOGICAL ASSESSMENT: WATCHING BRIEF REPORT

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SUMMARY

An archaeological assessment was carried out in advance of construction of a water treatment works and associated pipelines at Nefyn and Edern, Gwynedd. The report recommended fluxgate gradiometer survey of rare examples of elements of medieval strip field systems preserved in the modern landscape to the south of Morfa Nefyn and to the north of Nefyn. The geophysical survey detected anomalies best interpreted as features relating to the original medieval strip fields and their subsequent development. Mitigatory recommendations were made, based on this evidence (GAT reports 487 and 495). The present document reports on trial excavations carried out in order to clarify the mitigatory recommendations set out in GAT report 495

Two trial trenches were excavated in an attempt to determine the extent of the features detected during the geophysical survey. The features were found to be relatively slight with some anomalies only present as variations in the topsoil. It was recognised that the geophysical survey had produced somewhat abnormal results due to unusual soil conditions and that the features detected were less extensive and well preserved than the survey suggested. Revised mitigatory recommendations therefore consist only of an intensive watching brief during topsoil removal.

Evidence from a test pit and a section through a clawdd in the fields to the north of Nefyn suggests that this area has been heavily improved and deep ploughed. It is therefore unlikely that geophysical survey would be of benefit in this area. There is therefore no recommendation for further assessment in this area. An intensive watching brief during topsoil removal is still recommended, as there is some potential for the survival of archaeological features in this area.

The latest revision of the pipeline route avoids the possible barrow near Ty-mawr.

Mitigatory recommendatios for all features not examined in this report remain unchanged.

1 INTRODUCTION

Gwynedd Archaeological Trust was asked by Symonds Group to carry out an archaeological assessment in advance of construction of a water treatment works and associated pipeline at Nefyn, Gwynedd. An assessment report was prepared based on the route shown on Symonds Drawing No. 57748/RM/01 (Gwynedd Archaeological Trust report No. 487). The proposed pipeline extends from just south of Edern at SH28023976 to just north of Nefyn at SH31054103 with a treatment works at the Edern end (with a connection to Edern) and a pumping station close to the Nefyn end. The total length of easement is about 3.85km. The exact sizes and locations of the proposed Edern treatment works and Nefyn pumping station are not known, nor is the size and depth of the proposed pipeline.

The area lies just outside the Lleyn Area of Outstanding Natural Beauty but within the Lleyn Peninsula Environmentally Sensitive Area (ADAS 1988). Nefyn had a priory in the 12th century and was a Royal manor or llys of the Welsh kingdom of Gwynedd and a flourishing market town in the 13th and 14th centuries AD. Its importance was underlined by its choice by Edward I as the location for a royal tournament of international status to celebrate his victory over Llywelyn in 1282. The town was unfortunately largely destroyed during the Glyndwr rebellion and the exact sites of the Priory, Royal manor buildings and other contemporary housing still needs to be located. It is a valuable area for historical research in that it retained much of its medieval field systems until the middle of the 19th century and this latter is of particular relevance to the present project.

The first stage of assessment consisted of a desk top study and a field search (Fig . 1). The second stage comprised a programme of geophysical survey (Figs 2 and 3). This identified anomalies interpreted as features relating to the medieval strip field system and its subsequent development (GAT report No. 496, 2003). Mitigatory recommendations were made, based on this evidence. Geophysical survey cannot, however, give a reliable assessment of the depth and level of survival of archaeological features due to the complex set of variables that produce geophysical anomalies. It was therefore decided to carry out two

small trial excavations in order to further assess the archaeology and refine the mitigatory recommendations.

2 SPECIFICATION AND PROJECT DESIGN

Assessment excavations were carried in two areas in order to enhance the interpretation of the geophysical survey results. Both trenches had dimensions of 10m x 2m and were orientated across the linear geophysical anomalies (Fig. 3) The topsoil was removed by a mini digger using a toothless ditching bucket. The trenches were then hand cleaned and any features that emerged were part excavated. Photographic, written and drawn records were made of the excavations as they progressed. All site records and photographs have been retained in the project archive held at Gwynedd Archaeological Trust under project no. G1760.

Relevant test pits that were being excavated as part of the engineering works were also examined along with the removal of part of a clawdd (field boundary bank).

3. RESULTS

Trench A (Fig. 4)

Trench A was cut across the main linear anomaly in geophysical area C. About 0.35m of ploughsoil was removed revealing variable natural subsoil. This consisted of well cemented orange and grey sandy silts with a band of gravel and softer sand running across the centre of the trench. The gravel and sand band was interpreted as being a natural fluvio-glacial feature (03, Fig. 4). This was confirmed by extending the depth of the trench to 0.7m after the archaeological features had been investigated. Two features cut into the subsoil were visible:

Feature 01. A 0.8m diameter pit extending under the western side of the trench. The feature was subrounded in plan and 0.2m deep. The fill consisted of soft mid-brown loamy sand containing occasional charcoal flecks and chunks of redeposited subsoil. No datable material was recovered.

Feature 02. A 0.15m wide plough scar cutting into well cemented subsoil. The scar is probably at too great a depth to be a result of recent ploughing. This could therefore be a result of medieval agriculture.

Trench B (Fig. 5)

This trench was cut across the main linear anomaly in survey area E. Between 0.25m and 0.30m of loamy topsoil containing occasional late 19th century pottery sherds was removed revealing hard, well cemented, gravelly subsoil. This was somewhat variable with yellow and grey silt with some larger stones towards the north and mid orange brown gravelly silt at the south. Occasional plough scars were visible (e.g. feature 01, Fig. 5) due to differential drying of the subsoil surface where topsoil had been dragged through the surface of the gravel at the south of the trench.

Test pit 1

Topsoil was removed to a depth of 0.3m revealing featureless sandy gravel.

Test Pit 2

The topsoil was only 0.2m deep at this point. No archaeological features could be seen in the gravelly subsoil.

Test Pit 3

About 0.3m of ploughsoil was removed revealing clean gravel and clay subsoil.

A further test pit was monitored towards the Nefyn end of the pipeline (see Fig. 2 for location)

Test Pit 4

This test pit was located on the edge of a field containing a crop of turnips. The ploughsoil was unusually deep, at around 0.4m, and the subsoil was pure soft sand.

A length of clawdd was also removed in this area (see Fig. 2) in order to make an access point. This procedure was monitored by GAT. The clawdd was of sandy earth with a facing of demolition rubble consisting of quarried local granite with surviving lime mortar. A few large boulders in the base of the structure are probably all that remain of an earlier boundary. Examination of the field boundaries in this area suggests that the most have been rebuilt within the last 50 years.

4. CONCLUSIONS

The results of the trial excavations suggests that the possible medieval agricultural features revealed by the gradiometer survey are relatively slight and that some of the anomalies may only be present as variations in the topsoil. This level of magnetic response from such insubstantial features is very unusual although not unknown. Features that have been ploughed out may sometimes exist as variations in the topsoil and cannot be revealed by excavation (e.g. GAT report No. 428 Ty Mawr Development Study, Holyhead, p. 11). The trial excavations demonstrated that the level of the survival of archaeological features associated with the medieval field system is generally low and that the major linear anomalies running down the centre of the fields are probably only present as residual topsoil variations. It is therefore not possible to assign a definite date to them. It can be concluded that the major archaeological value of this area lies in the preservation of the medieval field pattern by the present field boundaries.

The evidence from the test pit and clawdd removal in the two fields to the north of Nefyn suggests that this area has been heavily improved and deep ploughed. The soft sandy subsoil is also not the ideal medium for the preservation of relatively slight subsoil features.

5. REVISED ASSESSMENT AND MITIGATORY RECOMMENDATIONS

- The trial excavations revealed a lower than expected level of survival of features relating to the medieval strip field system (feature 20). There are therefore no archaeological reasons to avoid the creation of a topsoil stripped easement. An intensive watching brief during topsoil removal, if an easement is created, is still recommended here as the potential for the survival of some archaeological features has been demonstrated. Provision should also be made for the collection and processing of environmental samples from any buried soils that are encountered.

- The fields to the north of Nefyn appear to have a fairly low potential for the survival of features relating to the medieval field system, as a result of intensive agricultural improvement. It is therefore unlikely that geophysical survey would be of benefit in this area. There is therefore no recommendation for further assessment in this area. An intensive watching brief during topsoil removal is still recommended here, as there is some potential for the survival of archaeological features.

- The latest revision of the pipeline route avoids the possible barrow in area F (Jim Hannah, Galliford Try pers. com.). The mitigatory recommendation for this feature can therefore be revised to *avoidance.*

All other recommendations remain unchanged, these are listed below for reference (see GAT reports 487 and 496 for further details)

- There is a possibility that prehistoric features survive in a field (feature 3) at the west end of the pipeline route (including the site of the Edern Treatment Works). An intensive watching brief is recommended during topsoil removal..

- Burials identified in the nineteenth century, to the north of Edern church, could indicate an early ecclesiastical site an intensive watching brief is recommended during topsoil stripping in this area.

- The pipeline route runs just to the south of a site where Bronze Age cremation urns were discovered in the late seventeenth century (site 38). An intensive watching brief is recommended during topsoil stripping in this area.

- It is also recommended that all field boundaries along the part of the pipeline passing through open fields should be reinstated following their original profile and in a similar style in order to preserve the character of the historic landscape.

The pipeline runs along an existing road as it passes through Nefyn. There are no archaeological implications associated with this section. The pipeline then passes through open fields that contain further elements of relict medieval strip fields.

- There are no archaeological implications associated with the eastern end of the pipeline which again follows a modern road.

Most of the other extant archaeological and historic features are of only local or minor value, such as track ways and field banks. Their interest lies in their position in the landscape, rather than their detailed structure and they require no response although it is assumed that they will be reinstated.

- There is a high density of historical and archaeological sites in this area so a partial watching brief is recommended along the remainder of the pipeline route.

6. REVISED SUMMARY OF RECOMMENDATIONS

Further assessment

- None

Mitigatory recommendations

- Avoidance, possible round barrow near feature 38.
- Intensive watching brief Features 3, 37, 20 25, 26, 27, 28, 29, 30 31, 32, 38, 11, 13, 14, 15, 17, and 18.
- Partial watching brief Entire route where no other mitigation
- Re-instatement Features 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36.
- None Features 12, 16

8. BIBLIOGRAPHY

Gwynedd Archaeological Trust Report 428 2001, *Ty Mawr Development Study, Holyhead, Archaeological Evaluation*
Gwynedd Archaeological Trust Report 487 2003, *Nefyn Waste Water Scheme (Revised Route) Archaeological Assessment.*
Gwynedd Archaeological Trust Report 496 2003, *Nefyn Waste Water Scheme (Revised Route) Archaeological Assessment, Geophysical Survey Report*

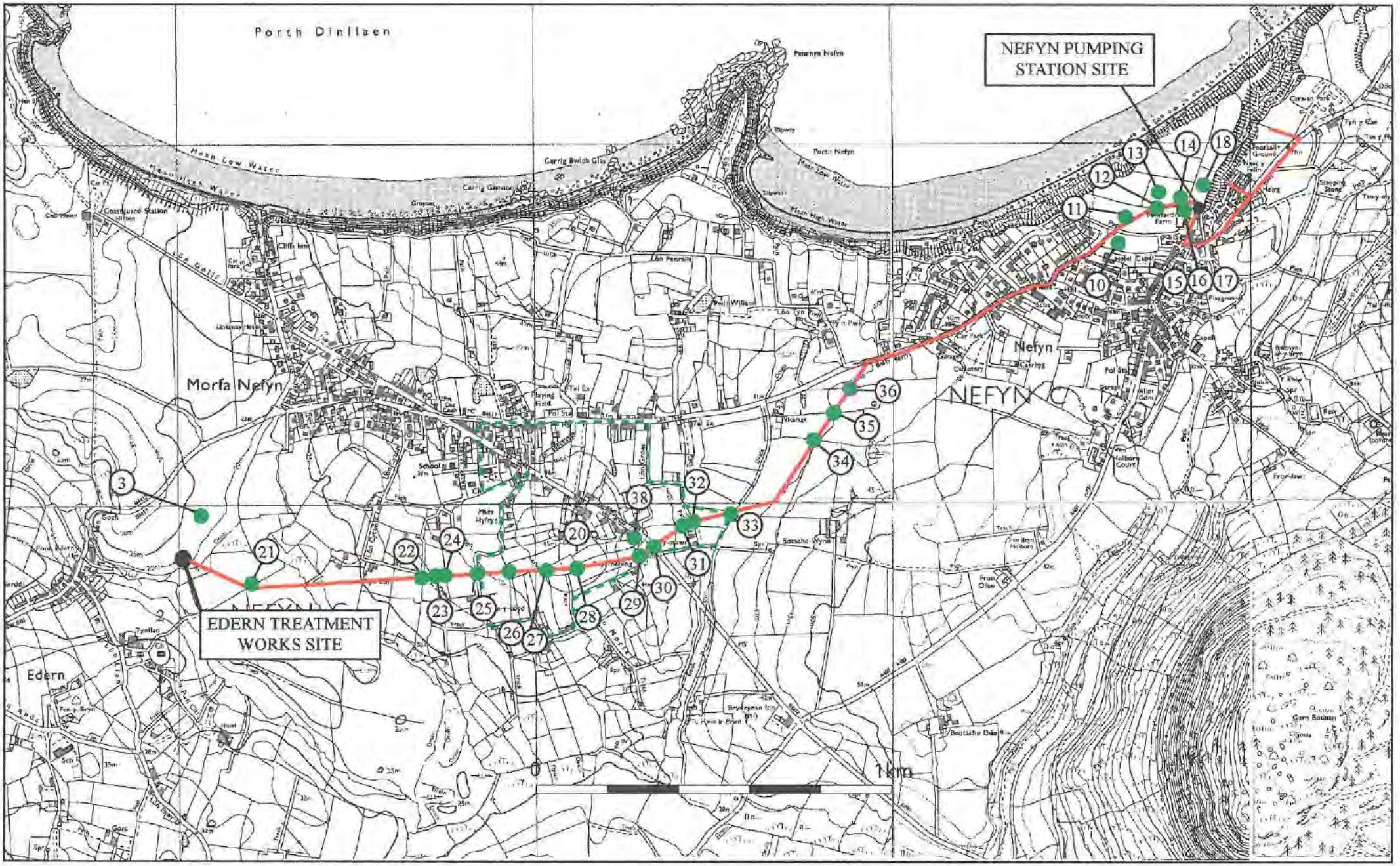


Fig. 1 Location of archaeological and historical features identified during the initial assessment (GAT report 487, 2003)
Reproduced from Ordnance Survey 1:10,000 scale maps. Crown copyright. All rights reserved. Licence no. AL 100020895.

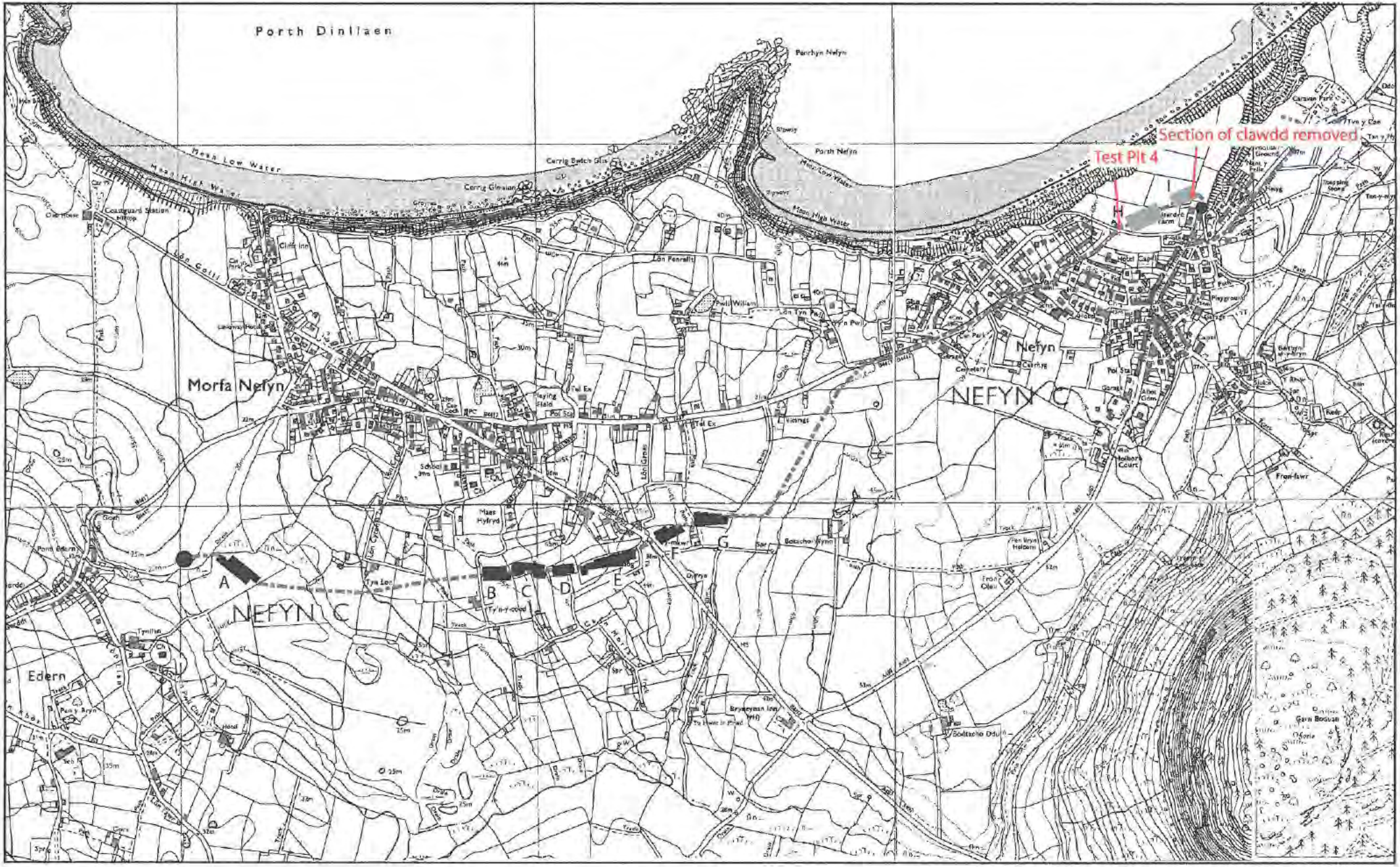
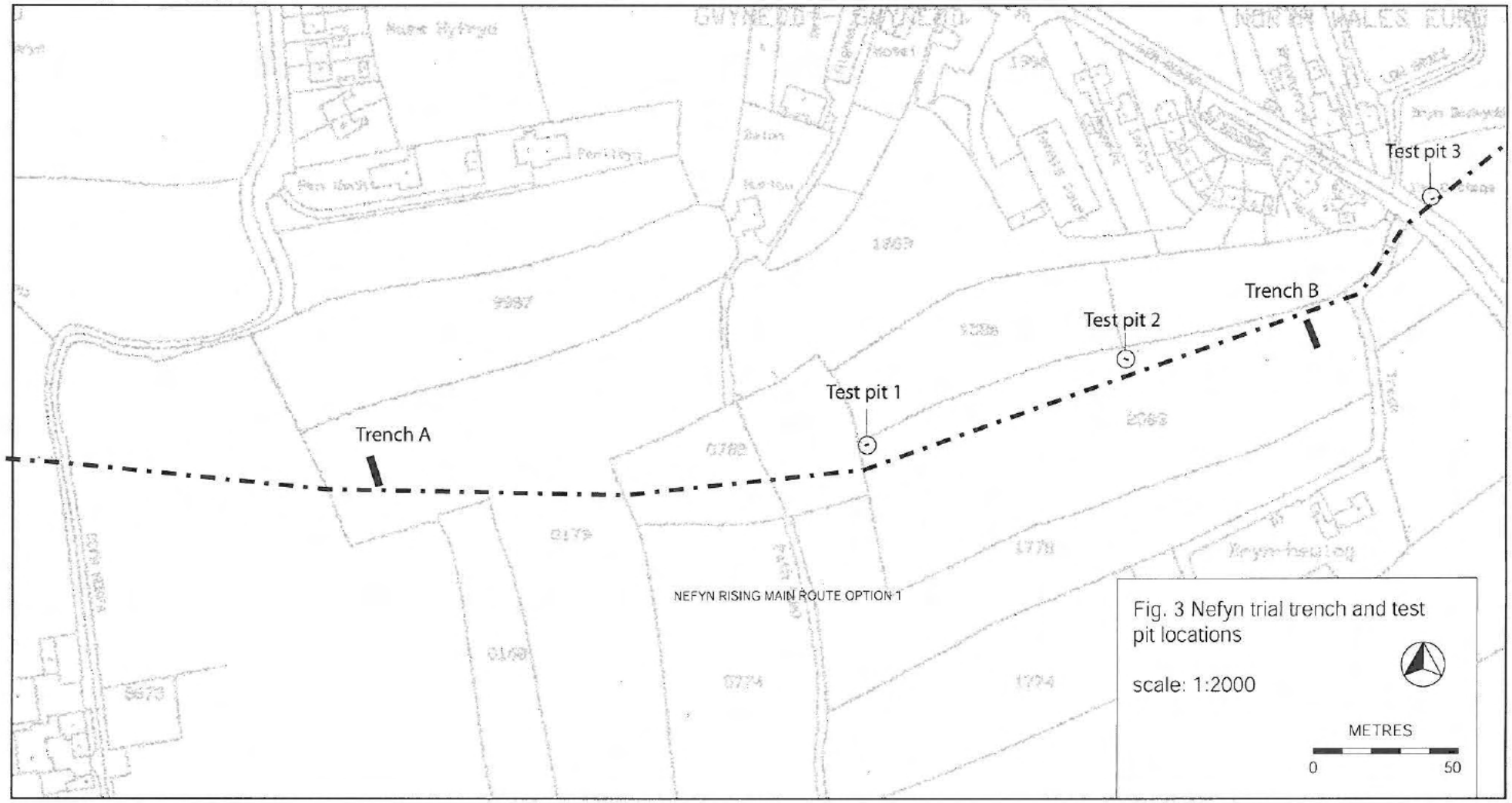
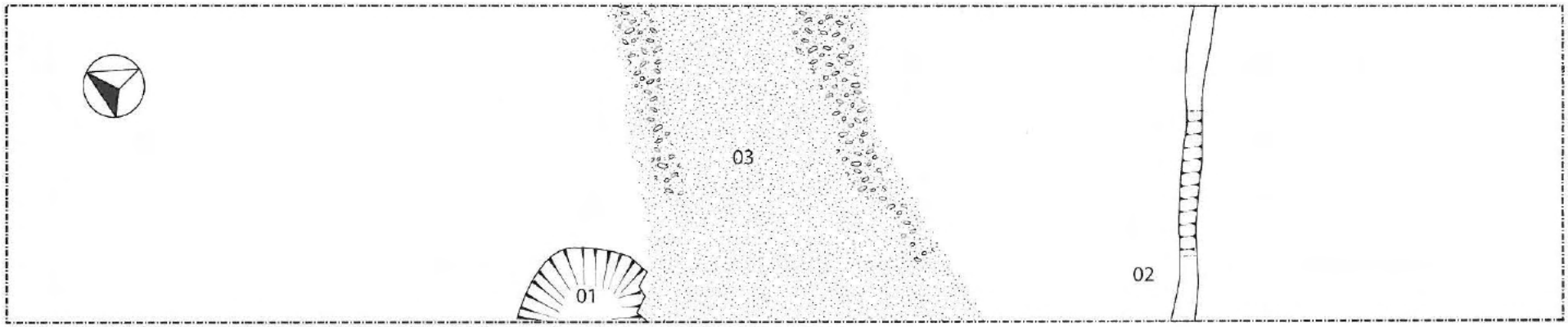
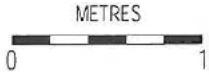
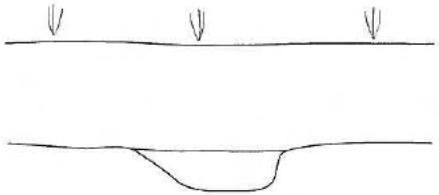


Fig. 2 Nefyn Scheme showing location of geophysical survey areas and Test Pit 4

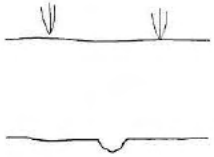

Test pit 3
Trench B
Test pit 2
Test pit 1
Trench A
NEFYN RISING MAIN ROUTE OPTION 1
Fig. 3 Nefyn trial trench and test pit locations
scale: 1:2000
METRES
0
50







NE facing Section through pit 01



NE facing section through feature 02

Fig. 4 Plan of trench A and sections through features

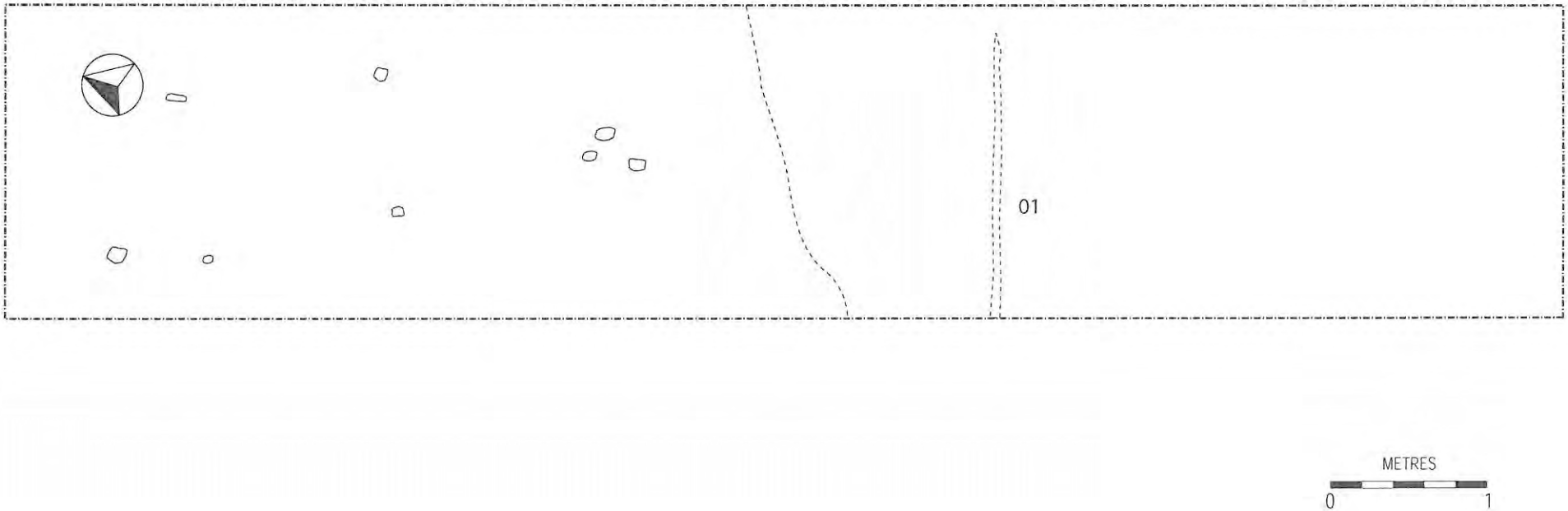


Fig. 5 Plan of trench B

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