

LAND AT CEFNCAEAU, LLANELLI ARCHAEOLOGICAL APPRAISAL



Prepared
by
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for
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By

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SUMMARY

Proposals for a new development on land at Cefncaeau, Llanelli (NGR SS53569957), currently being devised by Corus UK, required an archaeological appraisal. GVA Grimley, on behalf of Corus UK, commissioned Cambria Archaeology Field Services to carry out the appraisal in May 2007.

The proposed development site lies within an area of reclaimed former salt marsh that extends east from Llanelli. The landscape within the proposed development site is typical of a coastal wetland that has been reclaimed over a long period of time, with irregular fields separated by sinuous, former tidal watercourses. The existing pattern of drains, watercourses and fields is largely a product of the 18th and 19th centuries, with possible traces of the former medieval open strip fields.

As with all coastal wetland environments the proposed development site has the potential to contain significant palaeoenvironmental evidence within its underlying deposits. Therefore, a programme to monitor any geotechnical ground investigation works, in order to assess the palaeoenvironmental potential of the underlying deposits, has been suggested.

1. INTRODUCTION

Project proposals and commission

Corus UK are advancing proposals for a new residential development on land at Cefncaeau, Llanelli (NGR SS53569957). The proposed development area occupies an area of reclaimed coastal saltmarsh on the southeast edge of Llanelli. Previous work in and around Llanelli has highlighted the importance and potential of the Llanelli coastal region. Therefore, this archaeological appraisal was deemed necessary to provide up to date baseline information regarding the development and condition of the archaeological and cultural heritage resource within the development site. GVA Grimley, on behalf of Corus UK commissioned Cambria Archaeology Field Services to carry out the appraisal in May 2007.

Scope of the project

This appraisal was designed to provide enough information to allow an assessment of the potential archaeological resource within the proposed development area and the likely impacts of the proposed development on that resource. Recommendations for further work or mitigation measures have been given where appropriate.

The appraisal was a non-intrusive process and consisted of the examination of a wide variety of source material held at a number of local, regional and national repositories and a site visit.

Report outline

This report describes the physical environment of the study area (Section 2) before summarising the archaeological resource (Section 3) and the likely impact of the proposed scheme on that resource (Section 4). Suggestions for possible further archaeological works based on the results of Sections 3 and 4 are given in Section 5.

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). References to cartographic and documentary evidence and published sources are given in brackets throughout the text, with full details listed in the sources section at the rear of the report.

2. THE STUDY AREA

The proposed development site occupies c.9.5ha (c.24 acres) of reclaimed salt marsh on the southern edge of Llanelli at NGR SS53569957. The site, which is three separate plots, is currently divided into small irregular pasture fields, some of which are crossed by watercourses.

The Cefncaeau region of Llanelli was formerly part of the extensive Morfa Mawr, the Great Marsh, an area of coastal wetlands that stretched along the coast from Llanelli to Loughor. The marsh has been enclosed and drained in a number of episodes that started in the medieval period.

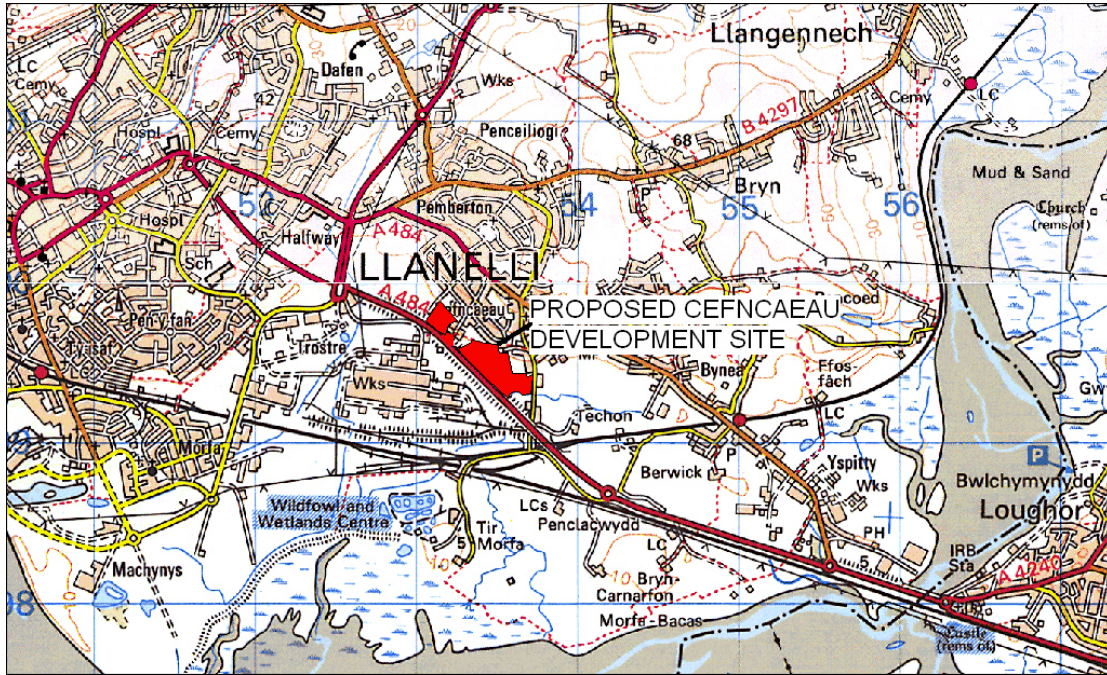


Figure1: Location map showing extent of proposed development site.

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Wetland landscapes

The importance of wetlands as areas of high archaeological potential has been recognised since the mid-19th century. Since that time, work in wetland areas – coastal or otherwise – has produced a number of important archaeological finds, sites and even entire landscapes preserved within their unique conditions.

There is little doubt that the principal archaeological importance of wetlands is the survival of forms of evidence not normally recoverable from dry sites, namely organic materials such as wood, plant remains, leather and textiles. Furthermore, the matrix within which this material is found also has archaeological potential as it can contain palaeoenvironmental evidence, including pollen, plant and insect remains, which provide information about past landscapes and climates. This provides a wider study base for the investigation of wetland sites than is possible on comparative dry land sites, giving a more integrated and fuller understanding of past activity.

Previous work carried out on the coastal wetlands around Llanelli has outlined their development history and highlighted their archaeological potential (James

1993; James and Morgan 1994; Page 1997; Page 1999; Page 2000; Lillie *et al* 2000; Lillie *et al* 2003; Page 2005; Page 2006a; 2006b; Page 2006c).

Landscape development within the study area

The coastal wetlands of Llanelli are a dynamic and constantly evolving environment that have been shaped by natural processes, such as rising sea levels and the changing course of the River Loughor, and human actions, which have included the reclamation of large areas of former salt marsh. The proposed development site lies within such an area of reclaimed saltmarsh. Mapping and aerial photography clearly show the pattern of former tidal creeks and watercourses fossilised in the irregular field boundaries throughout this area.

Traces of former landscapes are present on the foreshore in the intertidal zone a short distance to the south of the study area, where remnants of a submerged forest are often visible at low tide. A radiocarbon date of 4190 ± 80 BP (Swan-238) was obtained from a sample of peat from the submerged forest (Page 1997, 8), which calibrates out at 2 sigma level (95% confidence) to 2921-2475 cal BC. This suggests that during the Neolithic period the north bank of the Loughor estuary was well wooded and extended further south as the Loughor followed a more southerly route along the north shore of the Gower.

Results from palaeoenvironmental sampling at Machynys, c.1km to the southwest of the study area, also confirmed that the north shore of the Loughor extended further south during the Neolithic and subsequent Bronze Age (Lillie *et al* 2000; Lillie *et al* 2003).

Reclamation of the saltmarshes in the Cefncaeau area began in the medieval period with a bank erected around Maes ar Dafen to control the tidal reach of the Afon Dafen. The northeast end of this early bank lies just outside the southern boundary of the proposed development site and part of it may survive as a low earthwork to the south of the A484. Later 19th century Ordnance Survey maps show this bank stopping at a field boundary that has since been lost below the A484

A map of lands around Berwig produced in 1751 shows that many of the present day landscape components had been established by the mid 18th century. At that time most of the study area was enclosed with some areas retaining traces of the former medieval open strip fields, which were still visible on the mid 19th century Llanelli parish tithe map (Fig. 2). Some of these boundaries are still visible, but others have been lost as the landscape has undergone 19th and 20th century reorganisation.

The present landscape has the typical appearance of a coastal wetland that was reclaimed over a long period of time, with irregular fields separated by sinuous watercourses. The sinuous nature of the watercourses are characteristic of former tidal creeks that have been incorporated into the reclaimed areas to provide the drainage necessary to ensure that the newly enclosed land does not flood. This pattern is discernible even in those surrounding areas that have been built up since the later 19th century, with some of the housing occupying plots still defined by boundaries shown on the 1751 map.

The industrialisation of the area

Coal has been the single biggest natural factor in the cultural development of the area: the Llanelli coalfield has been defined as stretching from Pwll (Moreb Fault) in the west to the River Loughor (Plas Isaf Fault) in the east and from Machynys

in the south to Cwm Lleidi Reservoir in the north (Symons 1979, 7). Without coal, the metal processing industries that were essential to the growth of Llanelli would never have developed.

The Burry Inlet provided good access to the sea for the export of coal, steel and tinplate. Consequently, numerous shipping places were established along the coastline, from Loughor to Burry Port, to service the various industrial concerns. Eventually, as the various metal processing industries became more centralised, shipping became focused on the various docks at Llanelli and the town began to flourish.

Coal mining began at Cefncaeau during the 17th century, when an agreement was made between John Vaughan and Lewis Lloyd of Llangennech for the extraction of coal under Keven y Maes (Symons 1979, 35). The exact location of this early mine is uncertain, but somewhere around NGR SN525000 is likely. This places it just outside the proposed development site, close to or under the current Trostre roundabout. Two other early mines, sunk by Thomas Bowen in the mid 18th century are known from this same area, and they are now also under the roundabout.

By the early to mid-19th century a number of pits were operating close to the edges of the proposed development site, many of which were extracting coal from below it. A 20th century plan of the minerals at 'Maes-yr-Dafen' shows some of the underground workings dating from 1850 of the Cefncaeau Colliery, which was located under the Cefncaeau estate just to the north of the development site (Carmarthen Records Office reference Stepney Collection P393).

The Maes-ar-Ddafen Colliery was established just outside the west boundary of the development site in the mid to late 19th century. It consisted of several pit head buildings and a tramway leading northwest to link with the Great Western Railway at Halfway. The tramway and buildings had been removed by 1916 (Page 2005). Although the Maes-ar-Ddafen Colliery lay outside the proposed development site, the plan of underground workings described above illustrates how the underground galleries can stretch for some distance in various directions, possibly into the development site.

As well as the underground workings, the proposed development site may also contain previously unrecorded shafts and pits, which are common throughout this part of Llanelli.



Plate 1: The western part of the site now used as grazing land.



Plate 2: The eastern part of the site.

4. POTENTIAL IMPACT OF DEVELOPMENT ON THE ARCHAEOLOGICAL RESOURCE

There are no known above ground archaeological sites or features and the proposed design layout for the site appears to retain many of the existing landscape features, such as boundaries and watercourses. However, the processes of development could still have implications for the potential buried archaeological resource and some existing landscape features.

The impacts of built development in a wetland environment

New building has a range of processes that have immediate and very obvious archaeological implications. The main processes are:

1. Site clearance
2. Demolition of standing remains or boundaries
3. Excavations for new foundations and service trenches
4. Construction of new roads
5. Landscaping
6. Heavy machinery moving across the site.

To these can be added the further implications of construction in a wetland environment, which include:

1. Changes to the drainage pattern in the development site affecting the local water table, which can lead to the drying out of waterlogged deposits across a wide area
2. The introduction of oxygen into an anaerobic environment leading to the loss of organic material
3. Pollution and chemical changes affecting buried waterlogged deposits
4. Compression of the underlying deposits

Although it is not intended to discuss all of the above issues it is worth emphasising a few of the issues to highlight the particular problems of development in a wetland environment.

All building works require physical intervention, from site clearance works, to topsoil stripping, levelling, through to the excavation of foundation and service trenches prior to construction. All of these carry the obvious potential of damaging or destroying surface features, such as the surviving boundaries. They also have the potential to damage or remove previously unknown buried archaeological sites or deposits.

As well as the obvious and direct impacts that can occur during the above processes they can also have a significant indirect impact through the lowering of water tables and the introduction of pollution or oxygen into what is – if left undisturbed – a reasonably stable, but fragile environment.

Potential impacts on the historic landscape

Any development could significantly alter the existing character of the site, although, the history of this part of Llanelli is one of reclamation and industry, so change in this area is not without precedent. However, the layout of watercourses, drains and fields is vulnerable to large-scale and unsympathetic development.

Alterations to the layout could remove a landscape that has been established for well over 150 years, with some elements significantly older than that.

Potential impacts on the buried archaeological resource

The nature of the underlying deposits is unknown and their palaeoenvironmental potential has yet to be assessed. However, given the potential identified during sampling in the Machynys region, c.1km to the southwest, it is possible that deposits on this site may also contain significant palaeoenvironmental material.

5. SUGGESTIONS FOR FURTHER ARCHAEOLOGICAL WORKS

This appraisal has shown that the development site contains remains that characterise the development of Llanelli and the surrounding area. It has also highlighted the palaeoenvironmental potential of the buried deposits.

The historic landscape

The irregular pattern of fields, defined by the watercourses and drains, is characteristic of a reclaimed coastal wetland and it should, if possible, be maintained. If built development is to take place it is desirable that it is confined to within the existing fields so that each field is retained as a separate and discrete block of land. This will retain the historic layout of the landscape and provide a more interesting environment.

Buried remains and the palaeoenvironmental potential

A sampling programme could be established to investigate and assess the nature of the underlying deposits and their potential to contain palaeoenvironmental material. The programme could, in the first instance, consist of monitoring any geotechnical works that may be undertaken. This could be followed by targeted hand-augering, based on the geotechnical results, to test the nature of the deposits through the rapid assessment of the pollen and other environmental indicators they may contain. The results of the rapid assessment could be used to determine whether further, more comprehensive sampling is required.

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