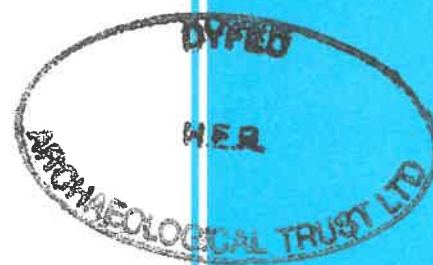


OLD CASTLE WORKS, LLANELLI CARMARTHENSHIRE



ARCHAEOLOGICAL DESK-BASED ASSESSMENT

For

MOTT MACDONALD

on behalf of

CARMARTHENSHIRE COUNTY COUNCIL

CA REPORT: 07039

APRIL 2007

COTSWOLD
ARCHAEOLOGY



OLD CASTLE WORKS, LLANELLI CARMARTHENSHIRE

DESK-BASED ARCHAEOLOGICAL ASSESSMENT

CA PROJECT: 2327
CA REPORT: 07039

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NON-TECHNICAL SUMMARY

Project: Old Castle Works, Llanelli
Unitary Authority: Carmarthenshire County Council
NGR: SN 49900, 00100
Type: Desk-Based Archaeological Assessment

In March 2007 Cotswold Archaeology was commissioned by Mott MacDonald on behalf of Carmarthenshire County Council to undertake a desk-based archaeological assessment of land at Old Castle Works, Llanelli, Carmarthenshire. The report addresses the below-ground archaeological resource, the visible archaeological resource and standing buildings. The site comprises the site of the former Old Castle Works tinplate works, which included a large number of 19th and 20th-century industrial buildings. All of these buildings have recently been demolished with the exception of the tinhouse, a Listed building which lies on the eastern side of the site.

The demolition of all buildings within the site, apart from the Listed tinhouse, has greatly reduced the former significance of the Old Castle Works. Three areas of former 19th-century development within the site have been identified, however, which are considered to be of historic significance regarding the development of the colliery and tin plate works (former iron forge, tin mills and colliery structures). Any below-ground features may be present from around 0.3m BGL, to around 2m or more BGL. Remaining areas of the site are of less historical significance.

1 INTRODUCTION

Abbreviations

AOD Above Ordnance Datum (sea level)

BGL Below Ground Level

1.1 Introduction

1.1.1 In March 2007 Cotswold Archaeology was commissioned by Mott MacDonald on behalf of Carmarthenshire County Council to undertake a desk-based archaeological assessment of land at Old Castle Works, Llanelli, Carmarthenshire (Fig. 1; SN 49900, 00100). The report addresses the below-ground archaeological resource, the visible archaeological resource and standing buildings (the built heritage), referred to collectively as the 'cultural heritage resource'. The primary objectives of this chapter may be summarised as follows;

- to identify statutory and non-statutory cultural heritage constraints (including planning constraints) within and in the immediate vicinity of the site;
- to gather information on the cultural heritage resource, including previous published and unpublished archaeological investigations and finds;
- to gather information from cartographic and documentary sources on the recorded historic landuse within the site; and
- to carry out a site visit in order to assess the extant cultural heritage resource within the site.

1.1.2 These objectives are intended to inform an assessment of baseline conditions within the site. Remaining objectives include;

- to assess the baseline conditions and offer an analysis of the preservation, potential and importance of the recorded cultural heritage resource within the site; and
- to assess the baseline information and offer an analysis of the potential for currently unrecorded cultural heritage remains within the site.

1.2 Extent of survey and conditions

1.2.1 The site comprises an area of approximately 6ha on the western periphery of Llanelli. Current landuse within the site is illustrated on Fig. 10. The area is defined

by a canalised water course to the west and south and by the B3044 road to Sandy to the east. The north of the site is not physically defined, but comprises a line parallel to and approximately 20m north of the Pont d'Agen footbridge and footpath.

- 1.3 The site comprises the site of the former Old Castle Works tinplate works, which included a large number of 19th and 20th-century industrial buildings. All of these buildings have recently been demolished with the exception of the tinhouse, a Listed building which lies on the eastern side of the site. The bricks and other material from the demolished buildings has been spread over the site as a levelling layer. A fence separates the area of demolished buildings from landscaped grass banks in People's Park, which occupy the northern part of the site. The footpath leading to the Pont d'Agen footbridge runs along the summit of the bank.

2.0 METHODOLOGY

2.1 Sources

- 2.1.1 The content of the cultural heritage assessment has been produced in accordance with *The Works, Llanelli: Written Scheme of Investigation* produced by Cotswold Archaeology in March 2007, and approved by Charles Hill, Development Control Officer, Cambria Archaeology, archaeological advisors to Carmarthenshire County Council. It has also been guided by *Standard and Guidance for Desk-Based Assessment* issued by the Institute of Field Archaeologists (IFA 2001) and *Environmental Impact Assessment: a Guide to Procedures* issued by the National Assembly for Wales and the former DETR (2000).
- 2.1.2 The baseline survey involved consultation of readily available archaeological and historical information from documentary and cartographic sources. The major repositories of information consulted comprised:

Cadw

- List of Buildings of Special Architectural or Historic Interest;
- Database of Scheduled Monuments;
- Register of Parks and Gardens of Historic Interest; and
- Register of Landscapes of Outstanding Historic Interest in Wales.

Cambria Archaeology Sites and Monuments Record (SMR)

- List and information on archaeological sites and findspots, and archive information on the Old Castle Works; and
- Published and unpublished documentary sources.

Royal Commission on the Ancient and Historical Monuments in Wales (RCAHMW)

- Archive information on the Old Castle Works, including RCAHMW photographic survey. List of archaeological sites, excavations and archives.

Carmarthenshire Archives Service

- Historic maps and documents.

Site Inspection

- A visual walkover survey of the site was carried out on 27th March 2007.

3.0 PLANNING POLICY AND DESIGNATED SITES

3.1 *International*

- 3.1.1 The site does not lie within a World Heritage Site or a site included on the Tentative List of World Heritage Sites.

3.2 *National*

- 3.2.1 Current planning policy guidance for Wales has been published by the National Assembly for Wales (March 2002) in *Planning Policy Wales: Chapter 6 Conserving the Historic Environment*. This updates the earlier planning advice contained within Welsh Office Circular 60/96 (December 1996) *Planning and the Historic Environment: Archaeology*. The guidance emphasises the role of the Assembly's executive agency Cadw in providing statutory protection for Scheduled Monuments and buildings of special architectural or historic interest (Listed Buildings).

Scheduled Monuments

- 3.2.2 There are no Scheduled Monuments within the site. The nearest Scheduled Monument comprises the medieval Old Castle Scheduled Monument CM323 (6, Fig. 2), situated around 150m north-east of the site.

Listed buildings

- 3.2.3 There is one Listed building within the site, the tinhouse (1, Fig. 2; Grade 2*, Cadw Ref. 18657). Other Listed buildings lying within the wider environs of the site are depicted on Fig. 2 (2 – 5, Fig. 2).
- 3.2.4 The site does not lie within a Registered Landscape of Outstanding or Special Historic Interest in Wales (Cadw 1998 and 2001). No Registered Parks or Gardens of Special Historic Interest in Wales (Cadw 2000) lie within the site.
- 3.2.5 Importance is also placed on the databases held by the Royal Commission on the Ancient and Historical Monuments in Wales (RCAHMW; the NMR register) and the Sites and Monuments Records (SMR) curated by the four Welsh Archaeological Trusts in guiding local planning authorities (Cambria Archaeology in Carmarthenshire). Both of these sources are addressed within the baseline survey.

3.3 Regional and Local

- 3.3.1 The Carmarthenshire Unitary Development Plan (adopted July 2006) outlines planning policy regarding the historic environment. Relevant policies include:
- Policy BE1: Scheduled Ancient Monuments and Archaeological Remains of National Importance. *'It is the policy of Carmarthenshire County Council that developments or works which would adversely affect the preservation, archaeological potential, amenity, historic value or the setting of sites of a Scheduled Ancient Monument or Archaeological Remains considered of National importance will not be permitted';*
 - Policy BE2: Archaeological Sites. *'It is the policy of Carmarthenshire County Council that developments or works which would adversely affect the preservation, archaeological potential, amenity, historic value or the setting of sites of local or regional importance will not be permitted. Exceptions will only be made where the planning authority, in considering the relative importance of the remains and the likely effect of and need for the proposal, is satisfied that i) the adverse impacts are minimised; and ii) the need for the proposal outweighs any likely harm. The Council will seek where possible to preserve the remains in situ. Where preservation in situ is not practicable the council may require excavation and recording of the archaeological remains';*
 - Policy BE 3: Archaeological Assessment. *'It is the policy of Carmarthenshire County Council that where development is proposed on or near sites of*

archaeological interest an archaeological assessment will be required prior to the determination of the application.....Note: Developers will be required to submit an assessment of the implications of any proposal on or near archaeological remains. This should include an evaluation of the character, extent and importance of the remains, the means of mitigation through design to achieve preservation in situ, or where acceptable to the Authority, provision for the recording of the remains. Where applicable, the Council will consult with Cadw and other relevant bodies, including Cambria Archaeology'.

- 3.3.2 The site does not lie within a Conservation Area defined in the Unitary Development Plan.

4 BASELINE CONDITIONS

4.1 Previous archaeological work

- 4.1.1 No intrusive archaeological investigations have previously taken place within the site or its immediate vicinity. The works buildings were subject of a photographic survey by the RCAHMS in June 1997, a copy of which was kindly made available to Cotswold Archaeology.

4.2 Geology and the palaeoenvironment

- 4.2.1 The site was subject to a detailed geotechnical survey (Ground Investigation Ltd 2006) shortly after the demolition of the buildings, and thus refers to depths below the current ground level (April 2007). This information has been used to inform the current section.

Geological sequence

- 4.2.2 The solid geology of the site comprises sandstone, mudstone and siltstone of the Pennant Sandstone Member and Swansea Member. Coal seams are associated with these formations, and the Llanelli syncline runs beneath the northern part of the site, with further synclines ('Rosy' and 'Fiery') to the south. The Llanelli syncline was exploited from the former Old Castle Colliery (see Fig. 4) and the Coal Authority records two shafts on the eastern edge of the site. The Authority further records workings in four coal seams beneath the site, between 50m and 180m BGL in depth. Borehole results indicate bedrock to be present at depths of between 10m and 12.6m BGL, with probable weathered bedrock deposits from depths of 7.6m BGL.

- 4.2.3 Glacial Till, comprising a mixed sandy clay/silt, overlies the solid geological strata. Boreholes found this to occur between 2.7 to 7.5m BGL.
- 4.2.4 The British Geological Survey maps Estuarine Alluvium across the whole site, although the geotechnical survey found that these deposits may only occur in the northern and western zones of the site. The Alluvium was found in the geotechnical survey to occur at depths of between 2.05m to 4.3m BGL. The Alluvium is likely to have been predominantly deposited in the late Devensian and Flandrian Stages of the British Quaternary.
- 4.2.5 Made Ground lies across the whole site to a minimum depth of 2.05m BGL and a maximum depth of 5.6m BGL. The upper parts of this unit comprises material resulting from the demolition of the works buildings, including brick and other building materials. The lower parts probably represent previous levelling layers and structural elements dating from the earliest phase of industrial usage, the Old Castle Colliery, in the early 19th century and later and include clay, gravel and building material. Structural elements were encountered in several trial pits excavated as part of the geotechnical survey, illustrated on Figs 8 and 9.

Palaeoenvironment

- 4.2.6 The geotechnical survey found no evidence for buried organic deposits of potential palaeoenvironmental significance. A buried topsoil layer was revealed on the western edge of the site, comprising decayed grass over soft, organic sandy silt, between 2.05m and 2.45m BGL. The date of this ground level is uncertain, but it was almost certainly buried after the early 19th century with the first industrial use of the site.

4.3 Prehistoric

- 4.3.1 No prehistoric finds or features are recorded within the site or its wider vicinity.

4.4 Roman

- 4.4.1 No Roman finds or features are recorded within the site or its wider vicinity. A Roman fort was situated at Loughor (*Leucarum*), around 6km south-east of the site, excavated from the late 1960s (Marvell and Owen-John 1997; Wilson 1972, 300-302). The fort was situated beneath the later medieval castle, and was situated on probable Roman roads leading to Carmarthen (*Moridunum*) and Neath (*Nidum*).

4.5 Early medieval and medieval

- 4.5.1 No early medieval or medieval finds or features are recorded within the site. A medieval motte castle is situated 150m north-east of the study area within the Pontwym reservoir (6, Fig. 2). The surviving mound, forming an island within the reservoir, is a Scheduled Monument. The castle may have been constructed in the late 11th century, and documentary sources suggest that it was attacked by Rhys ap Gruffydd in 1190. By the 14th century the castle had been replaced by a fortified residence (Page 1997, 17).

4.6 Post-medieval and modern

Old Castle Colliery

- 4.6.1 The Old Castle Colliery comprised two shafts constructed in 1836/37 to exploit the Llanelli Syncline coal seam which runs beneath the northern part of the site. The Coal Authority's Coal Mining Report records the shaft entrances on the eastern periphery of the site (Ground Investigation Limited 2006, 9-10). These shafts were connected with the Erw pit shaft which had opened earlier in 1810, situated at the present junction of Erw Road and Princess Street (Welsh Coal Mines website: www.welshcoalmines.co.uk). The colliery was the biggest in Llanelli in the first half of the 19th century, producing 40,000 tonnes of coal in 1846.
- 4.6.2 One of the earliest detailed maps of the area is the Llanelli Tithe map of 1842 (Fig. 3). Although the site area is illustrated, the Old Castle shafts and associated buildings are not depicted. It is possible that there were no buildings associated with the shafts at this date, but this is very unlikely. It is more likely that details of the Tithe map were based upon earlier survey or mapping, compiled before the establishment of the colliery. The Tithe map is of interest, as it shows the former course of the stream which was later canalised to the west and north of the site. Most of this area appears to have comprised salt marsh at this time, and the colliery buildings, and later tin plate works, were sited on reclaimed land.
- 4.6.3 Several structures are certainly depicted at the colliery on the later 1st Edition Ordnance Survey map of 1880 (Figs 4 and 8), when the colliery was a part of the Llanelli Copperworks Company. Pumping engines at the site drained the coal seams to enable deeper extraction, and the Old Castle engines were upgraded in 1847/48 when a 60" Cornish beam engine was installed at one of the two shafts (it is uncertain which; Protheroe Jones 2002). One of the buildings depicted on the 1880

map would have been the engine house itself, which was also upgraded in around 1847/48 (*ibid*). The colliery was served by the General Warde railway running to the south and north on the eastern edge of the site, and several further minor rail tracks served storage and waste heaps within the colliery site itself. The colliery ceased extraction in around 1889.

Establishment of the Old Castle Works

4.6.4 The Old Castle Works were established in 1867 by the Old Castle Iron and Tin Plate Company Limited just to the north of the colliery buildings (Figs 4 and 8). It was one of a large number of tinplate works established between 1846 and 1873 in the Llanelli district (Jones 1995, 44). The earliest phase of the works comprised two major processing facilities, the forge and the tin mills. The forge was constructed closest to the colliery buildings and manufactured wrought iron and rolled sheet bars. In common with other mid 19th-century tin plate works, the forge was steam-powered. The tinmills were situated to its north, and closer to the General Warde railway line, and rolled the bars into sheets and manufactured them into tinplate (Protheroe Jones 2002). A third main building of this phase of the works comprised a long narrow structure adjacent to the main railway line. This housed the company offices in the southern section, and the assorting rooms to the north.

4.6.5 At some time prior to 1880 the stream to west and north of the site shown on the Tithe map was canalised (Figs 4 and 11; it now forms the southern and western boundary of the site). It emptied into remaining areas of the salt marsh depicted on the 1880 Ordnance Survey map to the east of the Old Castle Works.

The later 19th century

4.6.6 The layout of the works is illustrated again on the Ordnance Survey map of 1907 (Figs 5 and 8), and the three original works buildings continued to form the basis of the complex at this date. During the 1880s, however, steel replaced wrought iron for tin plate manufacture and the iron forge itself ceased work in the 1890s (Protheroe Jones 2002). The forge buildings were converted into hot mills, and partly used for other less clear uses.

4.6.7 A further major alteration in the later 19th century was the extension of the tin mills towards the Old Castle Chemical Works, which were built to the north and west of the site (Fig. 5). Elsewhere there were minor alterations and extensions to the forge and offices, and the extension of the assorting rooms to the north. The Old Castle

Colliery closed in around 1889, and the colliery buildings had been demolished by 1907, with the exception of the narrow sheds immediately to the south of the forge (which were demolished between 1907 and 1916).

Early 20th century

- 4.6.8 The tin plate works appear to have reached maximum capacity for its earliest phase of buildings in the 1890s to 1900s. As with other similar works, once the maximum capacity of the hot mill engine was reached it became more economical to construct a second mill rather than to close the plant for a year or more in order to expand capacity of the existing site. Thus between 1905 and 1913 a new works complex was constructed to the south of the original 1867 complex to produce alongside it. It is likely that it would have worked in close connection with the earlier plant, but retained a degree of independence in its operation (Protheroe Jones 2002). The single surviving building on the site, the Grade 2* Listed tinhouse (1, Fig. 2; Figs 6, 8 and 12-15), belongs to this phase of buildings. Several minor structures were also constructed around the earlier works during this phase. The canalised stream course forming the southern and western site boundary was also extended during this period in order to improve drainage and land stability around the new works complex.

Mid 20th century and documented usage

- 4.6.9 The various operational areas of the extended works are detailed on a plan compiled by The Steel Company of Wales in 1952 (the works had ceased trading as the Old Castle Iron and Tin Plate Co Ltd in 1939; it traded as the Llanelli Associated Tinplate Cos Ltd between 1939 and 1947, and subsequently as The Steel Company of Wales). This has been used with other documentary sources to depict the building usage and constructional phases across the site in the 1950s, towards the end of the works' tinplate production in 1957, in Fig. 9.
- 4.6.10 In the inter-war period the early forge buildings were partially demolished. The eastern portion of the building containing the hot mills was retained and modified, with the mill engine attached to its east. The north-western corner of the structure also appears to have been retained and modified adjacent to the loco shed and fitting shop (Fig. 9). The cold roll engine and cold rolls lay to the north of the hot mills, with the annealing furnaces to the north again. The early offices and assorting rooms lay to the east of these structures.

The tinhouse

- 4.6.11 The surviving tinhouse is illustrated on Fig. 9, along with the hand-fed tinning machines located on the 1952 plan. These were situated within six tinning bays on either side, clear today, each with a hearth (with small blocked windows on either side) and chimney. Two bays in the southern range have had chimneys removed, and three bays in the northern range are partially bricked-up. A heavy iron lintel carries a segmentally vaulted brick ceiling and central rectangular chimney (Cadw 2007). There is a blocked segmentally arched doorway in the centre of the western wall which formerly led to the annealing furnaces and hot mills. Doors in the east wall led to the assorting department. It was constructed of rough rubble walling with a corrugated asbestos and slate roof.

Post 1950s

- 4.6.12 Manufacture of tinplate at the site ended in around 1957 when the site was partially converted to steel rolling mills, and from the 1960s to 1981 it was used for steel works and maintenance and storage. The northern range of buildings within the site, including the hot mills, the container department, the cold roll engines and rolls, the annealing furnaces, and smaller structures to the east were demolished between 1981 and 1986. The early 20th-century range of buildings, including the tinhouse, adjacent hot mills, annealing furnaces and assorting department, remained until 2006 when all buildings except the tinhouse were demolished and the site levelled.
- 4.6.13 The present road forming the approximate eastern boundary of the site was constructed in the late 1980s/early 1990s, at which time the grass bank landscaping in the northern part of the site was carried out. Current landuse within the site is illustrated in Fig. 10.
- 4.6.14 Remaining post-medieval and modern features in the area surrounding the site are depicted on Fig. 2 and listed in Appendix A.

5. ANALYSIS AND CONCLUSIONS

5.1 *Pre-modern archaeological potential*

Pre-medieval

- 5.1.1 There is no evidence for prehistoric, Roman or early medieval occupation or activity in the environs of the site, and there is little potential for currently unrecorded features of these periods within the site.

Medieval and post-medieval

- 5.1.2 The Old Castle medieval castle lies to the north-east of the site, now within the reservoir. There is no demonstrated evidence for associated medieval features beyond the area of the Scheduled Monument, and later documentary sources suggest that the castle was situated on the margin of the estuarine salt marshes. There is therefore little potential for currently unrecorded medieval features within the site.
- 5.1.3 There is no evidence for structures within the site area prior to the establishment of the Old Castle Colliery, and there is little potential for currently unrecorded post-medieval features within the site.

5.2 *Survival of modern industrial features*

- 5.2.1 One building survives above-ground within the site, the Grade 2* Listed tinhouse constructed between 1905 and 1913. The form of the building is described in paragraph 4.6.11 above, and is illustrated in Figs 12 to 15. No other industrial buildings or features within the site survive above-ground.
- 5.2.2 A large area of the northern part of the site was heavily landscaped in the late 1980s/early 1990s, and now comprises a high grassed earth bank with a footpath on the summit leading to Pont d'Agen footbridge (Fig. 10). It is likely that the landscaping works heavily impacted upon any below ground remains in this part of the site. This includes much of the area of the original 1867 iron forge and tin mills (Fig. 10).
- 5.2.3 Geotechnical works carried out on the southern/central part of the site have included test pits, the locations of which are depicted on Figs 8 and 9 in relation to the building phases. Figs 8 and 9 differentiate between those that recorded structural

remains and those that did not. Test pits recording structural remains comprised the following:

Test pit	Known building	Depth and type of structural element
1	Forge (1867)/Canteen (1916-51): the later canteen was remodelled/constructed on the site of the earlier forge	0.85m brickwork (inspection pit base?)
2	Fitting shop (1907-16) and extension (1916-51)	0.2m concrete slab
3	Boilers (1907-16)	0.3m concrete foundation
4	Hot mills (1907-1916)	0.91m concrete slab
5	Shed (1867)	0.5m wood
6	White pickling machine (1916-51)	0.3m brick wall (to 2.2m)
7	Cold roll engines (1907-1916)	0.7m concrete slab
8	Rail track?	0.3m iron pipe
9	Outdoor surface?	0.65m concrete slab
10	Outdoor surface?	0.36m concrete slab
11	Outdoor surface?	0.25m concrete slab
12	Outdoor surface?	0.35m concrete slab

- 5.2.4 The majority of test pits recording structural remains were situated within areas of known former buildings. Remaining test pits beyond known buildings recorded concrete slabs, presumably former outdoor surfaces. The former ground level of the works appears to be predominantly around 0.3 – 0.35m BGL. Deeper recorded features appear to relate to inserted features such as inspection pits etc. The overlying material is from the recent demolition of the buildings and subsequent levelling.
- 5.2.5 Further test pits situated within areas of former buildings did not record structural remains, suggesting that the level of below-ground survival of works buildings is variable across the site. No test pits were situated on the former colliery buildings within the south-eastern part of the site.
- 5.2.6 The test pit survey and borehole survey established Made Ground across the whole site to a minimum depth of 2.05m BGL and a maximum depth of 5.6m BGL. This appears to results from several episodes of deposition. High proportions of coal waste indicate deposits derived from the colliery tips during the Old Castle Colliery operations. Further deposits were probably deliberately placed in order to raise the ground level prior to the initial construction of the works in 1867 (the area largely formed salt marsh at this date). Further areas of Made Ground include high

proportions of iron slag, which probably resulted from the operation of the tinplate works itself.

5.3 **Potential significance of modern industrial features**

The tinhouse and former tin works structures

- 5.3.1 The tinhouse is a Grade 2* Listed building and is of National architectural and historic importance, even though its historic setting and relationship with the remainder of the tin works complex has been lost.
- 5.3.2 Prior to demolition, the complex as a whole was described by Robert Protheroe Jones (Curator (Heavy Industry), National Museum and Galleries of Wales) as 'the most complete surviving [tinplate] works in the UK' (Protheroe Jones 2002) and was recognised as a major surviving testament to the industrial history of both Llanelli and the country as a whole. With the demolition of all buildings except the tinhouse, however, the former high significance of the complex has been removed (the complex was recorded by photographic survey prior to its demolition by the RCAHMW, the archive of which is held in the Commission's Aberystwyth offices).
- 5.3.3 It has been established that structural features related to the former works survive below-ground. The significance of these remains has also been reduced due to the loss of association with the former buildings. It is possible, however, to identify two areas of higher historic significance in terms of the development of the site, depicted on the plan of current landuse Fig. 10:
- 1867 iron forge. The iron forge was constructed within the first of two major periods of tin plate manufacturing plant development in the UK. It was subsequently partially demolished and partially retained and altered in the earlier 20th century. The preservation and archaeological importance of any below-ground remains associated with the workings of the 1867 steam-powered iron forge are currently undetermined. The large majority of the former forge area is now beneath the landscaped bank in the northern part of the site; and
 - 1867 tin mills. The tin mills were also constructed during the earliest phase of the works, and were also subsequently greatly modified. The tin mills are entirely situated beneath the area of 1980s/90s landscaping in the northern part of the site.
- 5.3.4 Later buildings within the complex are much better recorded in terms of internal functionality, as depicted on Fig. 9 based on The Steel Company of Wales plans

(and also photographically recorded in the RCAHMS survey), and below-ground remains are of little significance in contributing to an understanding of the works.

Old Castle Colliery

- 5.3.5 The 19th-century colliery (1837-1889) was a major south Wales coalfield and an important Llanelli mine. Some of the former colliery buildings were situated within the site area (Fig. 10), and there is some potential for below-ground remains to survive in these areas and their vicinity. These may include features such as foundations for the winding engine, ancillary structures, tramroad, etc. This area has a historic significance relating to the transition from colliery to tin plate manufacture, although once again the preservation and archaeological importance of any below-ground remains are currently undetermined.

5.4 Conclusions

- 5.4 The demolition of all buildings within the site, apart from the Listed tinhouse, has greatly reduced the former significance of the Old Castle Works. Three areas of former 19th-century development within the site have been identified, however, which are considered to be of historic significance regarding the development of the colliery and tin plate works (former iron forge, tin mills and colliery structures). Any below-ground features may be present from around 0.3m BGL, to around 2m or more BGL. Remaining areas of the site are of less historical significance.

6. REFERENCES

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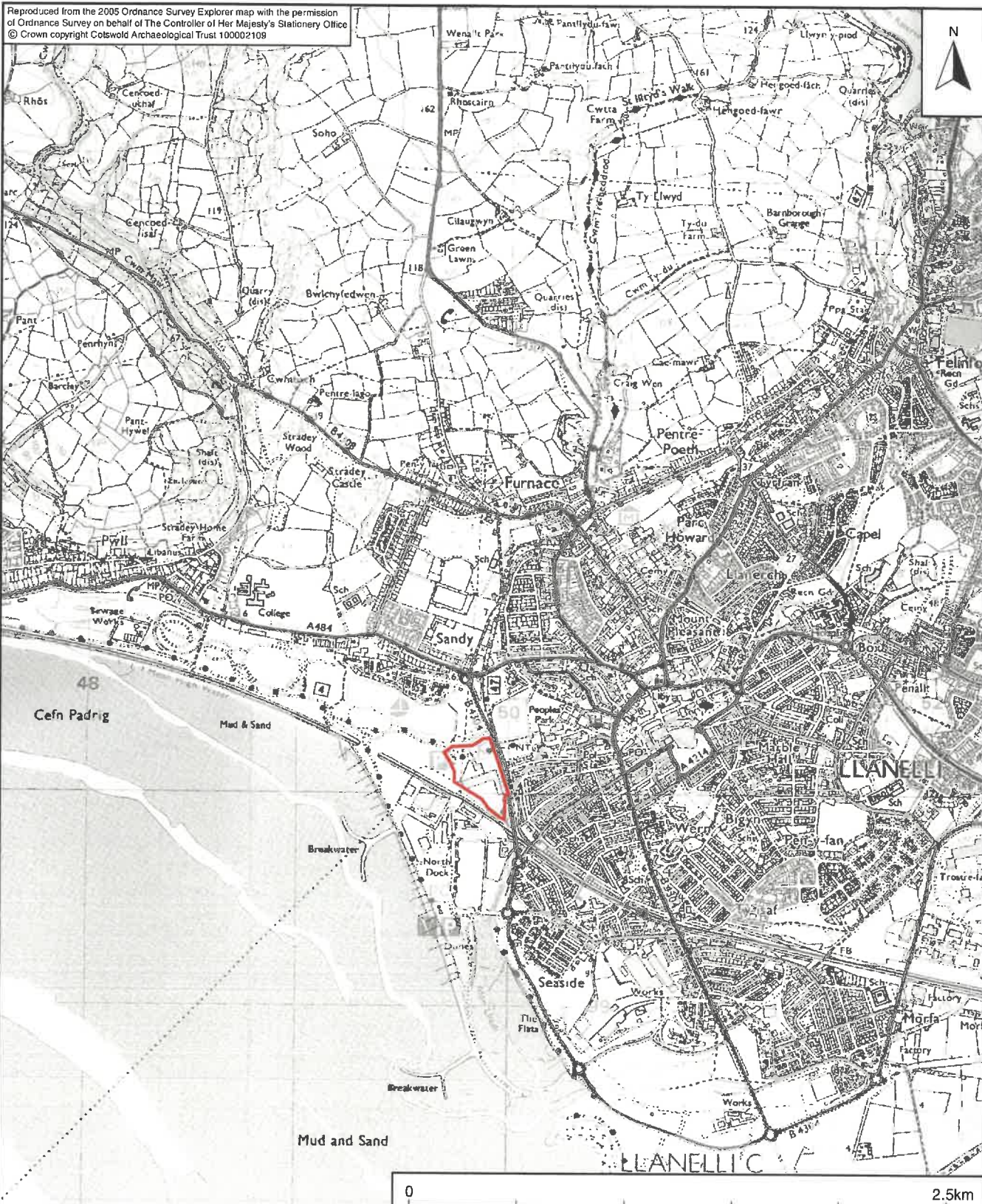
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Protheroe Jones, R., 2002 Letter to Ms Rowley-Williams, Cambria Archaeology of 15th July 2002, held in SMR files for the Old Castle Works

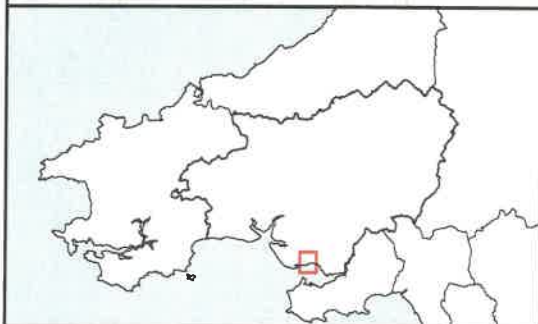
Wilson, D.R., 1972 'Glamorganshire: Roman Britain in 1971' *Britannia* Vol. 3

APPENDIX A: GAZETTEER OF CULTURAL HERITAGE SITES

No.	Description	Period	Status	Cadw ref SMR ref. NMR ref	Major Source
1	Tinhouse, Old Castle Tinplate Works	Modern	Listed Building Grade 2*	18657	Cadw Carmarthenshire County Council
2	Bridge over River Lliedi, Old Castle Road	Modern	Listed Building Grade 2	11947	Cadw
3	Engine House and Accumulator Tower, North Dock	Modern	Listed Building Grade 2	11946 8760	Cadw
4	Carmarthenshire Dock Tramroad Bridge, North Dock	Modern	Listed Building Grade 2	18044	Cadw
5	Carmarthenshire Dock Quays	Modern	Listed Building Grade 2	18043	Cadw
6	The Old Castle	Medieval	Scheduled Monument	CM323 694	Cadw
7	North Dock Bridge	Modern		37012	Ordnance Survey
8	Railway line	Modern		30736	Ordnance Survey
9	Old Castle Tinplate Works	Modern		9746 85495	RCAHMMW Ordnance Survey
10	Old Castle Colliery	Modern		8658 33412	Ordnance Survey
11	Lliedi Coal Canal	Modern		4485 34397	Ordnance Survey
12	Wiseboom Bridge	Modern		23915	Ordnance Survey
13	Old Castle Chemical Works	Modern		9436 41105	Ordnance Survey
14	Former tramroad	Modern		30865	Ordnance Survey
15	Ballast mound	Modern		271	Cambria Archaeology
16	Cefn Padrig, wreck site	Post-medieval/ Modern		34046	Cambria Archaeology
17	North Dock Reservoir	Modern		34044	Ordnance Survey
18	Former power station	Modern		4653	Cambria Archaeology
19	Old Castle Level Crossing	Modern		37027	Ordnance Survey
20	Bridge	Modern		4665	Ordnance Survey
21	North Dock Thomas Bowen Shipping Place	Modern		37019	Ordnance Survey
22	Former railway sidings	Modern		37018	Ordnance Survey
23	Single arch railway bridge	Modern		404318	RCAHMMW



0 2.5km



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Old Castle Works, Llanelli
Carmarthenshire

FIGURE TITLE

Location map

DRAWN BY

JE

SCALE

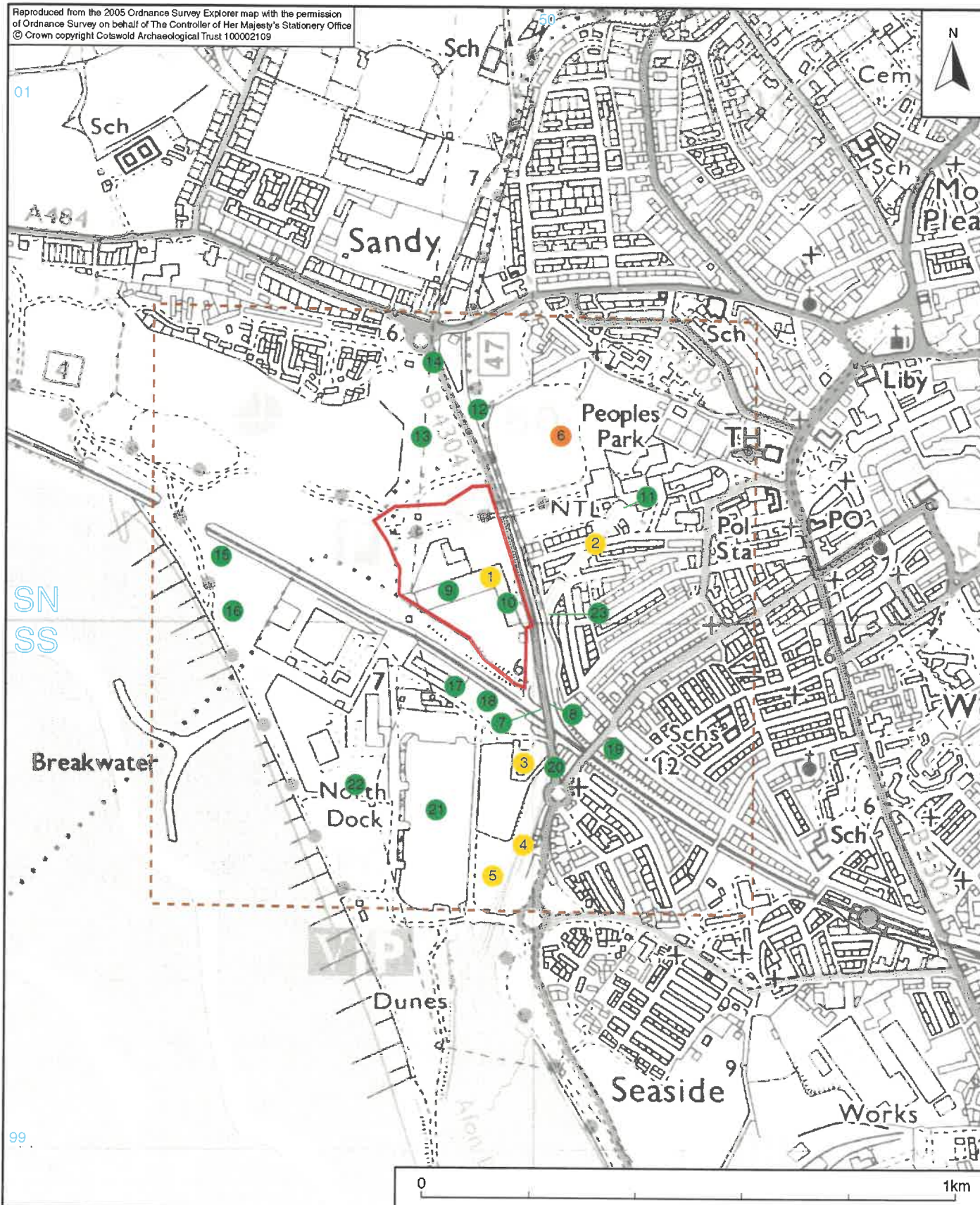
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PROJECT NO.

2327

FIGURE NO.

1



- site
- study area
- Listed building
- Scheduled Monument
- SMR/NMR sites



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Old Castle Works, Llanelli
Carmarthenshire

FIGURE TITLE

**The recorded archaeological
resource in the wider vicinity**

DRAWN BY

JE

SCALE

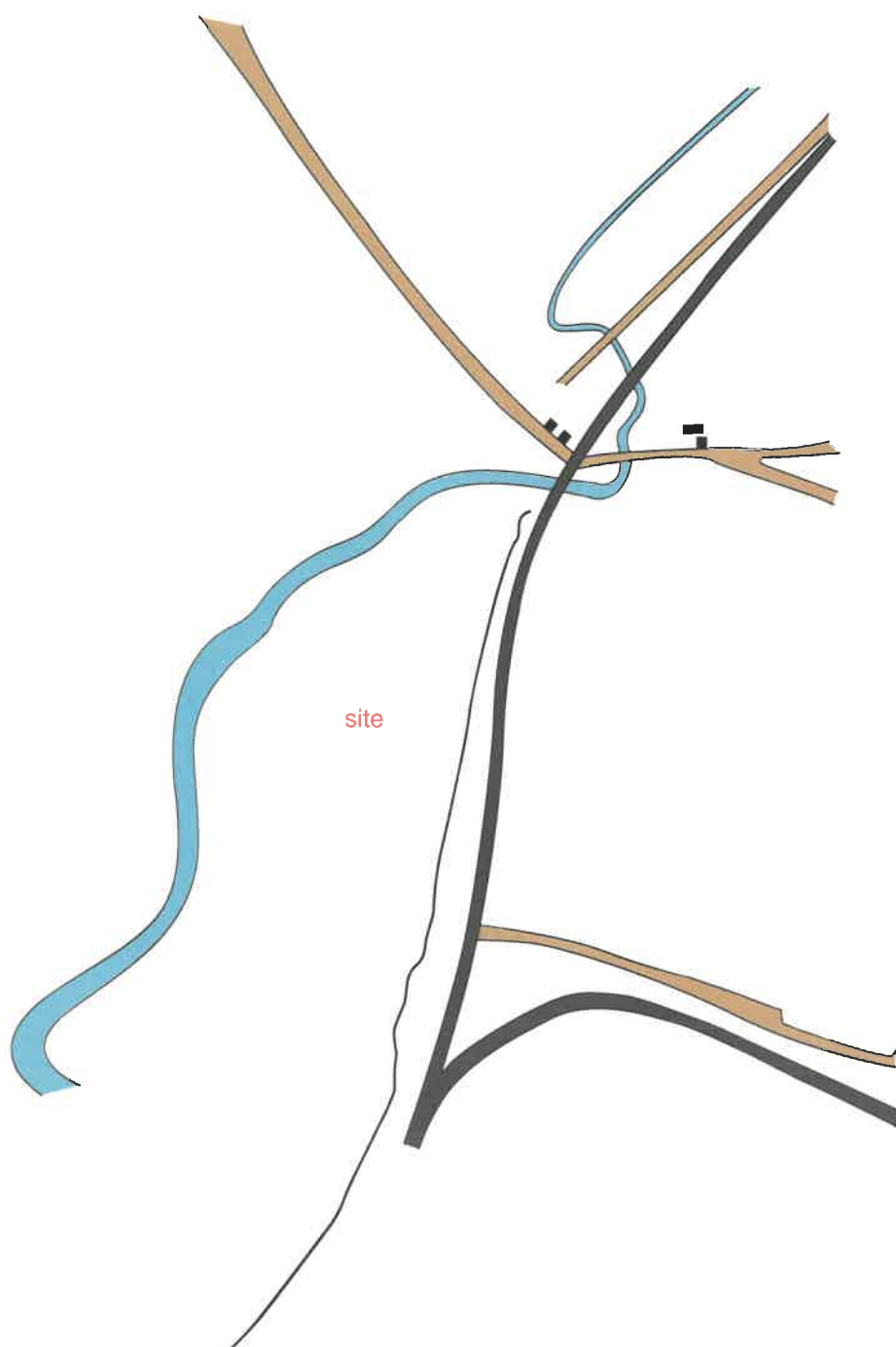
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PROJECT NO.

2327

FIGURE NO.

2



-  roads
-  railway/tramway
-  river



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Old Castle Works, Llanelli
Camarthenshire

FIGURE TITLE

**Redrawn extract of the 1842
Llanelli tithe map**

DRAWN BY

JE

SCALE

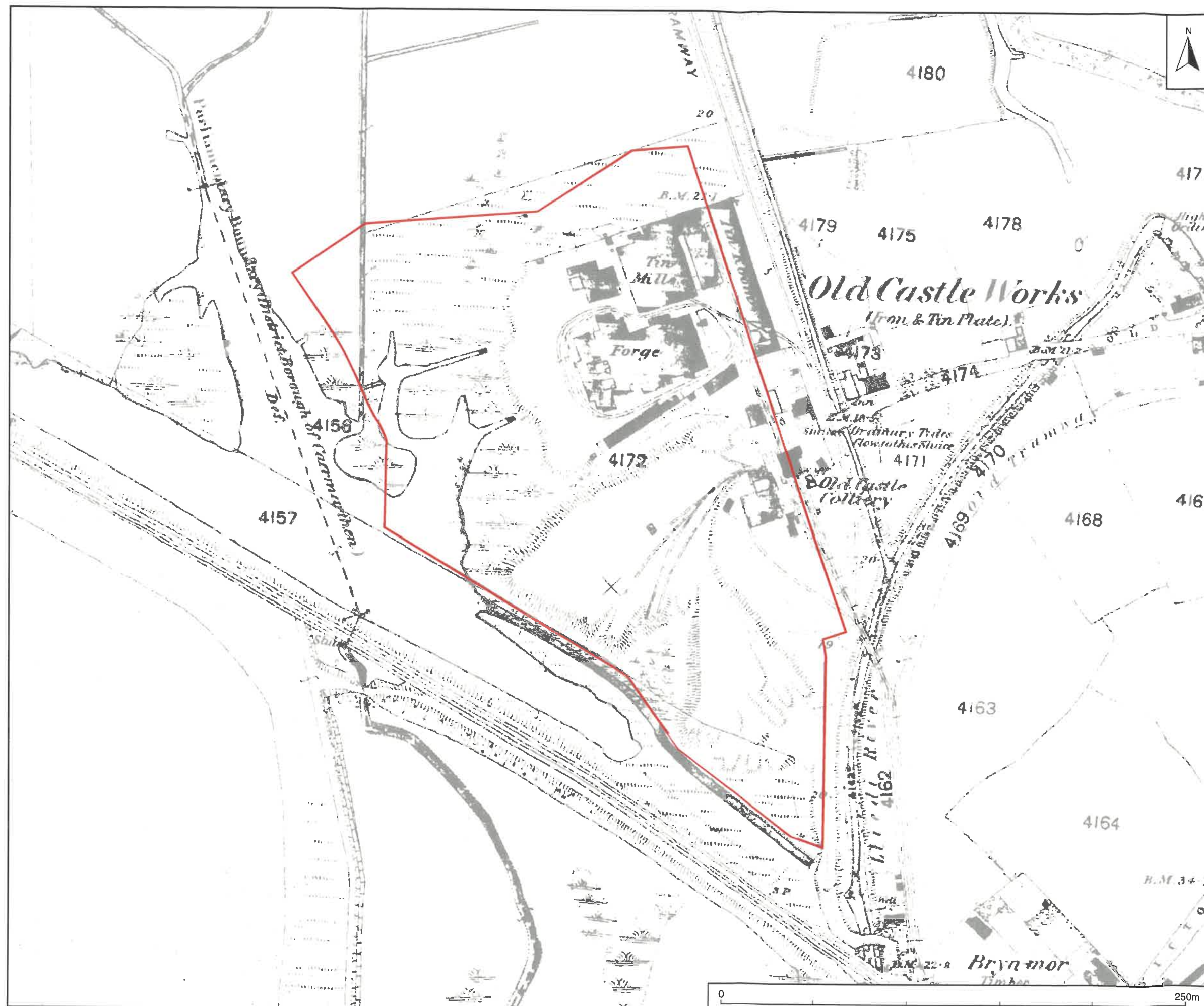
not to scale

PROJECT NO.

2327

FIGURE NO.

3



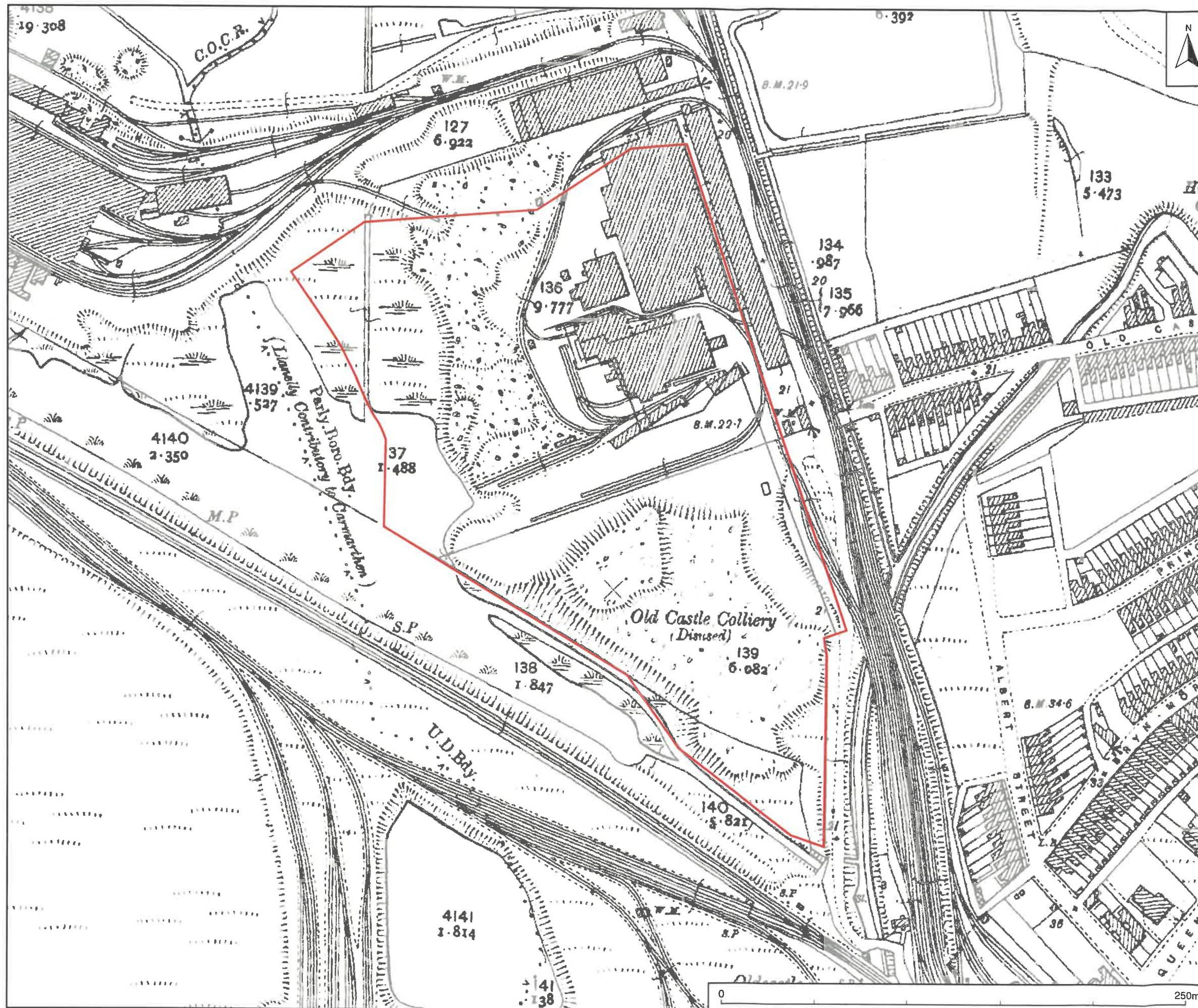
site

 COTSWOLD ARCHAEOLOGY

PROJECT TITLE
Old Castle Works, Llanelli,
Carmarthenshire

FIGURE TITLE
Extract from the 1880 Ordnance
Survey map

DRAWN BY JE	SCALE 1:2000@A3	PROJECT NO. 2327	FIGURE NO. 4
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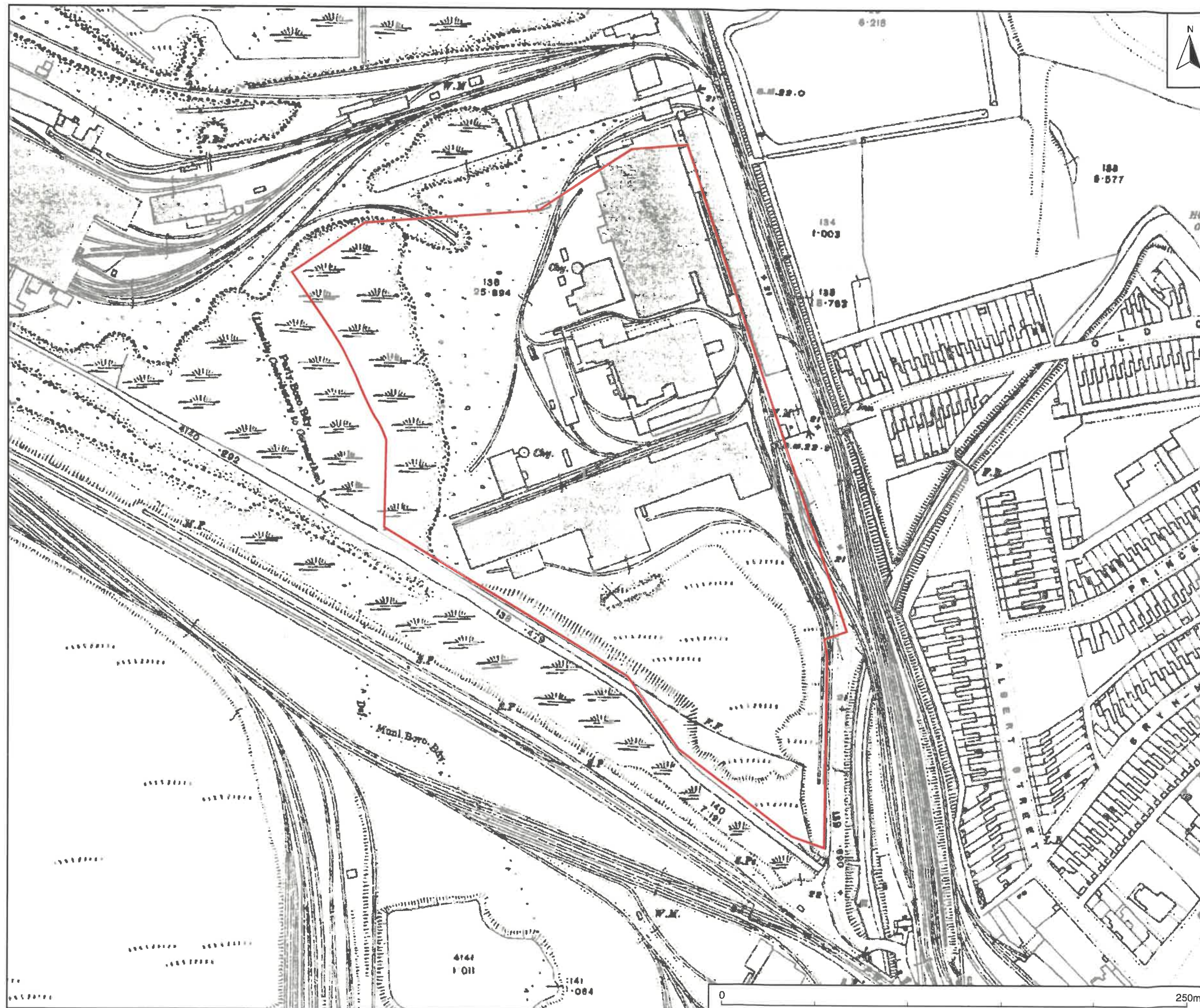
site

 COTSWOLD ARCHAEOLOGY

PROJECT TITLE
Old Castle Works, Llanelli,
Carmarthenshire

FIGURE TITLE
Extract from the 1907 Ordnance
Survey map

DRAWN BY	SCALE	PROJECT NO.	FIGURE NO.
JE	1:2000@A3	2327	5



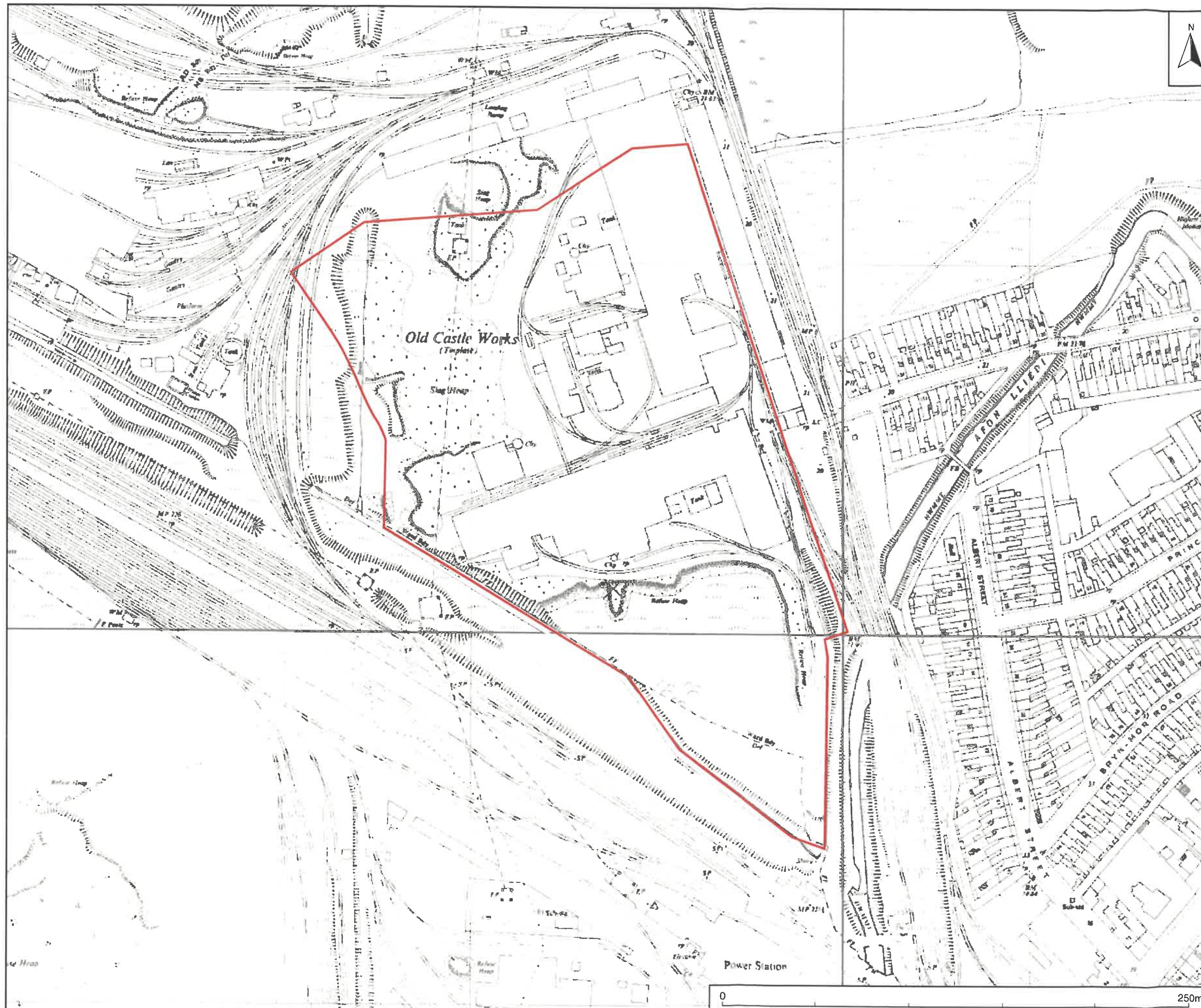
site

 COTSWOLD ARCHAEOLOGY

PROJECT TITLE
Old Castle Works, Llanelli,
Carmarthenshire

FIGURE TITLE
Extract from the 1916 Ordnance
Survey map

DRAWN BY	SCALE	PROJECT NO.	FIGURE NO.
JE	1:2000@A3	2327	6



site

 COTSWOLD ARCHAEOLOGY

PROJECT TITLE
Old Castle Works, Llanelli,
Carmarthenshire

FIGURE TITLE
**Extract from the 1951 Ordnance
Survey map**

DRAWN BY JE	SCALE 1:2000@A3	PROJECT NO. 2327	FIGURE NO. 7
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0

250m

 site

- geotechnical test pits encountering structural deposits
- geotechnical test pits not encountering structural deposits

— rail/tramway

- to 1880
- 1880-1907
- 1907-1916
- depicted 1880, demolished by 1916



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Old Castle Works, Llanelli
Camarthenshire

FIGURE TITLE

**Phased plan of landuse within
the site 1860s-1916**

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SCALE

1:2000@A4

PROJECT NO.

2327

FIGURE NO.

8



site

■ geotechnical test pits encountering structural deposits

• geotechnical test pits not encountering structural deposits

— rail/tramway

to 1880

1880-1907

1907-1916

1916-1951



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Old Castle Works, Llanelli
Camarthenshire

FIGURE TITLE

Phased plan of landuse within
the site in 1952

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JE

SCALE

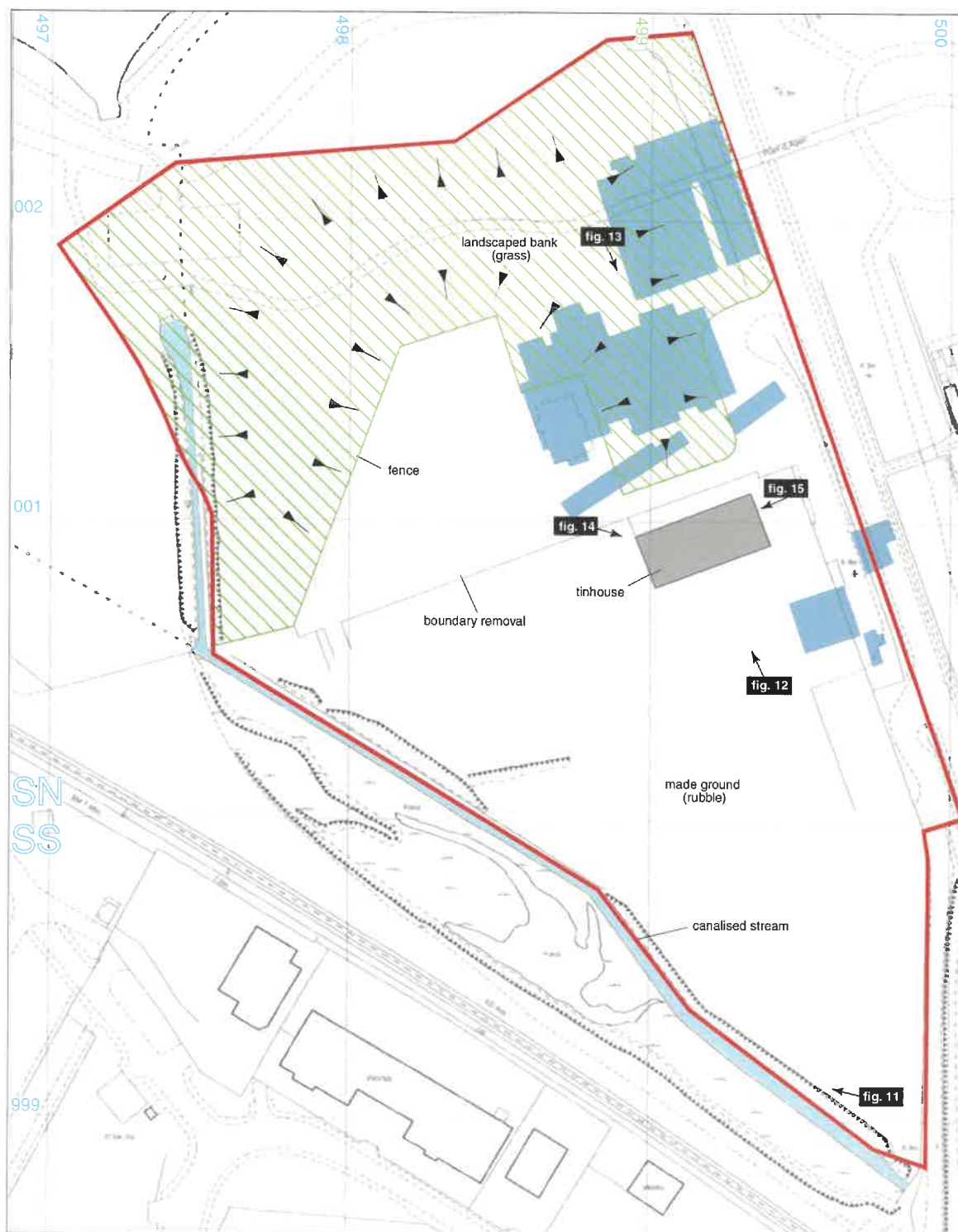
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PROJECT NO.

2327

FIGURE NO.

9



- site
- tinhouse
- canalised stream
- areas of historic significance
- heavily landscaped



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Old Castle Works, Llanelli
Camarthenshire

FIGURE TITLE

Current landuse

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SCALE

1:2000@A4

PROJECT NO.

2327

FIGURE NO.

10



11



12

11 Canalised stream facing north-west

12 Tinhoose facing north



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Old Castle Works, Llanelli
Camarthenshire

FIGURE TITLE

Photographs

DRAWN BY

JE

SCALE

n/a

PROJECT NO.

2327

FIGURE NO.

11&12



13



14

13 Tinhouse facing south

14 Tinhouse facing east



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Old Castle Works, Llanelli
Camarthenshire

FIGURE TITLE

Photographs

DRAWN BY

JE

SCALE

n/a

PROJECT NO.

2327

FIGURE NO.

13&14



15

15 Tinhouse facing west (internal)



COTSWOLD ARCHAEOLOGY

PROJECT TITLE

Old Castle Works, Llanelli
Carmarthenshire

FIGURE TITLE

Photograph

DRAWN BY

JE

SCALE

n/a

PROJECT NO.

2327

FIGURE NO.

15