

CARMARTHEN TOWN FOOTBALL GROUND, PITCH REPLACEMENT: ARCHAEOLOGICAL WATCHING BRIEF



Prepared by DAT Archaeological Services
For: South Wales Sports Grounds
Contractors Ltd



DYFED ARCHAEOLOGICAL TRUST

RHIF YR ADRODDIAD / REPORT NO. 2017/39
RHIF Y DIGWILLIAD / EVENT RECORD NO. 110468

Gorffennaf 2017
July 2017

**CARMARTHEN TOWN
FOOTBALL GROUND, PITCH REPLACEMENT:
ARCHAEOLOGICAL WATCHING BRIEF**

Gan / By

Alice Day and Hubert Wilson

Paratowyd yr adroddiad yma at ddefnydd y cwsmer yn unig. Ni dderbynnir cyfrifoldeb gan Ymddiriedolaeth Archaeolegol Dyfed Cyf am ei ddefnyddio gan unrhyw berson na phersonau eraill a fydd yn ei ddarllen neu ddibynnu ar y gwybodaeth y mae'n ei gynnwys

The report has been prepared for the specific use of the client. Dyfed Archaeological Trust Limited can accept no responsibility for its use by any other person or persons who may read it or rely on the information it contains.



Ymddiriedolaeth Archaeolegol Dyfed Cyf
Corner House, 6 Stryd Caerfyrddin, Llandeilo, Sir
Gaerfyrddin SA19 6AE
Ffon: Ymholiadau Cyffredinol 01558 823121
Adran Rheoli Treftadaeth 01558 823131
Epost: info@dyfedarchaeology.org.uk
Gwefan: www.archaeolegdyfed.org.uk

Dyfed Archaeological Trust Limited
Corner House, 6 Carmarthen Street, Llandeilo,
Carmarthenshire SA19 6AE
Tel: General Enquiries 01558 823121
Heritage Management Section 01558 823131
Email: info@dyfedarchaeology.org.uk
Website: www.dyfedarchaeology.org.uk

*Cwmni cyfyngedig (1198990) ynghyd ag elusen gofrestredig (504616) yw'r Ymddiriedolaeth.
The Trust is both a Limited Company (No. 1198990) and a Registered Charity (No. 504616)*
CADEIRYDD CHAIRMAN: Professor B C BURNHAM
CYFARWYDDWR DIRECTOR: K MURPHY BA MIFA

CARMARTHEN TOWN FOOTBALL GROUND, PITCH REPLACEMENT: ARCHAEOLOGICAL WATCHING BRIEF

CONTENTS

	SUMMARY	1
1	INTRODUCTION	2
1.1	Project Commission	2
1.2	Scope of the Project	2
1.3	Report outline	3
1.4	Abbreviations	3
1.5	Illustrations	3
1.6	Timeline	3
2	THE SITE	6
2.1	Location	6
2.2	Archaeological and Historical Background – Known Remains	6
2.3	Archaeological and Historical Background – Previous Archaeological Investigations	8
3	WATCHING BRIEF METHODOLOGY	14
3.1	Fieldwork	14
3.2	Timetabling of Fieldwork	14
3.3	Post-Fieldwork Reporting and Archiving	14
4	RESULTS AND DISCUSSION	18
5	CONCLUSIONS	47
6	SOURCES	48

APPENDIX I:	EXTRACTS OF THE ARCHAEOLOGICAL WRITTEN SCHEME OF INVESTIGATION FOR CARMARTHEN TOWN AFC, RICHMOND PARK PITCH REPLACEMENT	49
--------------------	--	-----------

TABLES

Table 1:	Archaeological and Historical Timeline for Wales	3
Table 2:	Depth of Roman archaeology observed in test pits ion 1996	11
Table 3:	Summary of Depths of Penetration at Test Postions	

FIGURES

Figure 1:	Location map for Carmarthen Football Ground, Carmarthen.	4
Figure 2:	Location map for Carmarthen Football Ground, also showing the outline of the scheduled area, the outline of Carmarthen Roman Town and the main Roman Road.	5

Figure 3:	Map of Roman Carmarthen showing main areas of excavation and investigation undertaken between 1961 and 2013.	8
Figure 4:	Results of the Geophysical Survey of the football pitch and adjacent tennis courts, undertaken by Geophysical Surveys of Bradford.	9
Figure 5:	Archaeological investigations associated with the Carmarthen Town AFC Richmond Park	10
Figure 6:	ESP DCP test locations, showing Roman Road in pink	13
Figure 7:	Section of construction depths supplied by client	15
Figure 8:	Carmarthen football pitch in relation to OS 2 nd edition 1906 map	16
Figure 9:	Plan showing archaeological deposits and drainage trenches revealed during watching brief. Red numbers and arrows indicate direction of photos referred to in the report.	17
Figure 10:	Plan of ESP DCP testing survey area	53

PHOTOGRAPHS

Photo 1:	View SW across exposed garden soils at the northern edge of the ground during topsoil stripping. Linear features drainage trenches	18
Photo 2:	View SW during topsoil stripping. Exposed cobbles and gravels associated with the Roman road can be seen in the foreground	19
Photo 3:	View South. Linear features are exposed drainage trenches. Background shows the stockpiled topsoil prior to removal	19
Photo 4:	View SW after completion of topsoil stripping. Roman road material can be seen in the foreground	20
Photo 5:	View NE towards dug-out, showing area of pebbles and gravels associated with the Roman road	21
Photo 6:	View SW across patch of exposed cobbles and gravels. Note modern drain T10 (dark band) to the right of 1m scale	22
Photo 7:	View NE across an exposed area of smaller more angular stone	22
Photo 8:	View NE. Outlier of exposed cobbles and gravels located approximately 3m south of the main band of material.	23
Photo 9:	View NW across patch of exposed cobbles situated near centre of ground	23
Photo 10:	View NE at exposed cobbles situated near centre of ground	24
Photo 11:	View SW at SE end of section through Roman road in TB	25
Photo 12:	View SW – detail of cross section through Roman road in TB	25
Photo 13:	View SW – detail of cross section through Roman road in TB	26
Photo 14:	View SW – detail of cross section through Roman road in TB	26

Photo 15:	View SW – detail of cross section through Roman road in <i>TB</i>	27
Photo 16:	View SW at NW end of section through Roman road in <i>TB</i>	27
Photo 17:	View SW – close up of fragment of Roman brick/tile sealed within Roman road	28
Photo 18:	View SW at whole of Roman road section revealed in <i>TB</i>	29
Photo 19:	View NW along re excavated drainage trench <i>TB</i>	30
Photo 20:	View NW showing small section of Roman road at west end of <i>T11</i>	31
Photo 21:	View west along drainage trench <i>T11</i> after re excavation	32
Photo 22:	View NE at remnant of slate linear corresponding with the boundary on the OS 2 nd edition 1906 map	
Photo 23:	View east at re excavated drainage trench <i>T1</i>	33
Photo 24:	View NE along re-excavated drainage trench <i>TA</i>	34
Photo 25:	View NW along north end of re-excavated drainage trench <i>TB</i>	35
Photo 26:	View south along re-excavated drainage trench at northern end of <i>TB</i>	36
Photo 27:	View NE at detail of section of Roman road in <i>TB</i>	37
Photo 28:	View NE at detail of section of Roman road in <i>TB</i>	37
Photo 29:	View SW at detail of section of Roman road in <i>TB</i>	38
Photo 30:	View SW at detail of section of Roman road in <i>TB</i>	38
Photo 31:	View SW at section of Roman road where <i>TB</i> meets diagonal drainage trench	39
Photo 32:	View NE at section of Roman road in diagonal drainage trench	40
Photo 33:	View south along re-excavated drainage trench cutting through the Roman road	41
Photo 34:	View north along <i>T11</i> during re-excavation of trench	42
Photo 35:	View SW along west end of <i>T11</i> after re-excavation of trench	43
Photo 36:	View NW at detail of section of Roman road in <i>T11</i>	44
Photo 37:	View NW at detail of Roman road in section in <i>T11</i>	44
Photo 38:	View NE along re-excavated drainage trench <i>T11</i>	45
Photo 39:	View NW across eastern half of pitch during near completion of groundworks	46

CARMARTHEN TOWN FOOTBALL GROUND, PITCH REPLACEMENT: ARCHAEOLOGICAL WATCHING BRIEF

SUMMARY

An archaeological watching brief was undertaken during groundworks for the replacement of the existing pitch at the Carmarthen Town AFC football ground, Richmond Park, Carmarthen (NGR SN 41565 20435). DAT Archaeological Services were commissioned by South Wales Sports Grounds Contractors Ltd to carry out the archaeological works.

Carmarthen Town AFC football ground lies within the designated area of Scheduled Monument CM234 – Carmarthen Roman Town. Previous archaeological investigations and a geophysical survey indicated the presence of a Roman road crossing the centre of the pitch (also shown as a parch mark in aerial photographs) and a series of possible wall lines representing structures of probable Roman date on either side of the road.

The groundworks entailed the removal of the upper layer of the pitch (turf and topsoil) down to the top of the garden soil. This exposed a series of stone filled drainage trenches which were installed in 1998, under archaeological supervision. The average depth of topsoil and turf removed during this operation was approximately 0.25m.

The initial topsoil stripping exposed small areas of cobbling and gravels on the surface at the eastern side of the ground within the projected line of the Roman road. Whilst the majority of the exposed areas are associated with the road there is a possibility that outlying areas are associated with other Roman features such as yards etc. or may possibly belong to a later period. These remains were exposed, but no further disturbance occurred. Following drainage installation the stripped level was covered with a geo-textile membrane and Type 3 porous material laid on top of this prior to the installation of the new pitch.

The old drainage system comprised a series of parallel stone-filled trenches each with a perforated pipe at the base (T1 – T22). They were 0.4m wide at the surface and narrowed to their base, and approximately 5m apart. Each one connected to trench (TB) which ran parallel with the long axis of the pitch approximately 9m from its western edge. Most of the drainage trenches were cut at the surface into dark garden soil which covered the majority of the football pitch area. Three of the drainage trenches intruded into the Roman road - which crossed the centre of the pitch at a slight angle.

In order to provide an adequate drainage system for the new pitch every other existing drainage trench was emptied of aggregate and the old perforated drain pipe beneath replaced. To achieve this and not cause any new ground disturbance, a similar v-shaped profile bucket to the one used when the original drainage was installed was utilised.

Removing the aggregate from the drainage trench (TB), which cut the Roman road at the western end of the ground, exposed a cross section of the upper levels of the road, consisting of cobbles and gravels. A piece of broken Roman brick/tile sealed within the road material was recovered.

A fairly large assemblage of multi-period pottery was uncovered during the watching brief. Almost all were surface finds, but a few were of Roman date, sealed within the road make-up. No other cut features or structures were uncovered.

1 INTRODUCTION

1.1 Project Commission

- 1.1.1 DAT Archaeological Services were commissioned by Mr Neil Belsham of South Wales Sports Grounds Contractors Ltd to undertake a watching brief during groundworks for the replacement of the existing pitch with a third generation 3G pitch at the Carmarthen Town AFC football ground, Richmond Park, Carmarthen (NGR SN 41565 20435; Figure 1).
- 1.1.2 Carmarthen Town AFC football ground lies within the designated area of Scheduled Monument CM234 – Carmarthen Roman Town (part of) (Figure 2). Following discussions with Cadw and based on the results of previous site investigation works and the development proposals, Scheduled Monument Consent (SMC) was granted for the pitch replacement with conditions.
- 1.1.3 The conditions of the Scheduled Monument Consent, as laid out in the letter dated 15/07/15 to Jonathon Lewis at Carmarthen Town Football Club were as follows:

General

1. that access to the site shall be afforded to representatives of Cadw;
2. that Cadw shall be given at least two weeks notice, in writing, of the date of commencement of the work or of any subsequent adjustment to allow Cadw's representative to monitor on site activity;

Pre-construction

3. That the applicant shall procure the services of a suitably qualified and experienced archaeologist whose name/company name shall be supplied to Cadw;
4. that a clear, written method statement is produced by the applicant and supplied to Cadw and to the applicant's contracted archaeologist. The method statement needs to lay out exactly the order in which operations need to be carried out, and the minimum depths of topsoil/overburden which can be removed;
5. the archaeologist shall be given all the paperwork and DCP results supplied for this application, together with a copy of this consent;
6. that an archaeological Written Scheme of Investigation (WSI) is produced in advance of works. The WSI needs to include, but is not limited to.
 - A watching brief whilst all turf and topsoil stripping is taking place. This should also include an agreed method statement with the applicant's contractors about the order in which areas will be stripped and a procedure for changing this order in the event that archaeological remains are uncovered which require more detailed recording and/or sampling;
 - The recording in plan of all archaeological features noted during the watching brief;
 - A strategy for assessing and, if necessary, sampling and/or evaluating any features which cannot be preserved in situ. This strategy needs to include clear liaison with, and permission from, Cadw in these circumstances;

- A strategy for sampling, should any features become exposed which may provide concrete dating evidence;
 - Post-excavation, reporting and, if appropriate, publication;
7. The WSI shall be provided to Cadw for signing off prior to commencement of any works;
 8. It is the responsibility of the applicant to ensure that any and all contractors are fully briefed on the Scheduled status of this site, and of the constraints which this imposes. This responsibility may be discharged through toolbox talks and/or through written instructions or leaflets. The applicant may request that their archaeologist undertakes this task for them; such requests should be clearly documented to avoid any confusion about responsibilities.

Please note that if a WSI and method statement cannot be produced and agreed between the applicant, the archaeological contractor and Cadw then works cannot begin on site.

During construction

9. The provisions of the WSI shall be adhered to strictly;
10. The aim shall always be 100% preservation in-situ of archaeological remains. If this is not possible, the archaeological procedures laid out in the WSI shall be followed. Liaison with Cadw shall be required;
11. The only exception to the above would be if samples for dating are required and can be taken without causing substantive damage to the feature concerned;

Post-construction

12. That a copy of the report shall be sent to the RCHAMW (Gareth.Edwards@rchamw.gov.uk), to the regional archaeological trust (M.Page@dyfedarchaeology.org.uk) and to Cadw (denise.harris@wales.gsi.gov.uk); and
 13. That the site shall be left in a stable and tidy condition, to the satisfaction of the landowner and of Cadw.
- 1.1.4 Several phases of previous archaeological work had been carried out at the site, the results of which were used to inform the current project. It was not necessary to interfere with any undisturbed archaeological deposits as minimum topsoil stripping was required for access to existing drainage channels, which were then re-excavated for new pipes to be laid.

1.2 Scope of the Project

- 1.2.1 A Written Scheme of Investigation (WSI) document for a watching brief was prepared by DAT Archaeological Services prior to the commencement of the works. The parts of the WSI not reproduced in this report are in Appendix I. The WSI outlined methodologies for:
- Monitoring groundworks in order to identify the presence/absence of any archaeological deposits;
 - Establishing the character, extent and date range for any archaeological deposits to be affected by the proposed groundworks;

- Appropriately investigating and recording any archaeological deposits to be affected by the groundworks;
- Producing an archive and report of any results.

1.2.2 The overall work was summarised as: *Archaeological attendance and recording during groundworks associated with the replacement of the existing football pitch surface at Carmarthen Town AFC, Richmond Park, Carmarthen. The works will entail further detailed recording of remains in the event they are exposed. The works will also include the production of a report and archive of the results.*

1.3 Report Outline

1.3.1 This report provides a summary and discussion of the archaeological watching brief and its results.

1.4 Illustrations

1.5.1 Printed map extracts are not necessarily reproduced to their original scale. On maps, north is towards the top of the page unless otherwise indicated.

1.5 Timeline

The following timeline (Table 1) is used within this report to give date ranges for the various archaeological periods that may be mentioned within the text.

Period	Approximate date	
Palaeolithic –	c.450,000 – 10,000 BC	Prehistoric
Mesolithic –	c. 10,000 – 4400 BC	
Neolithic –	c.4400 – 2300 BC	
Bronze Age –	c.2300 – 700 BC	
Iron Age –	c.700 BC – AD 43	
Roman (Romano-British) Period –	AD 43 – c. AD 410	Historic
Post-Roman / Early Medieval Period –	c. AD 410 – AD 1086	
Medieval Period –	1086 – 1536	
Post-Medieval Period ¹ –	1536 – 1750	
Industrial Period –	1750 – 1899	
Modern –	20th century onwards	

Table 1: Archaeological and Historical Timeline for Wales

¹ The post-medieval and Industrial periods are combined as the post-medieval period on the Regional Historic Environment Record as held by Dyfed Archaeological Trust

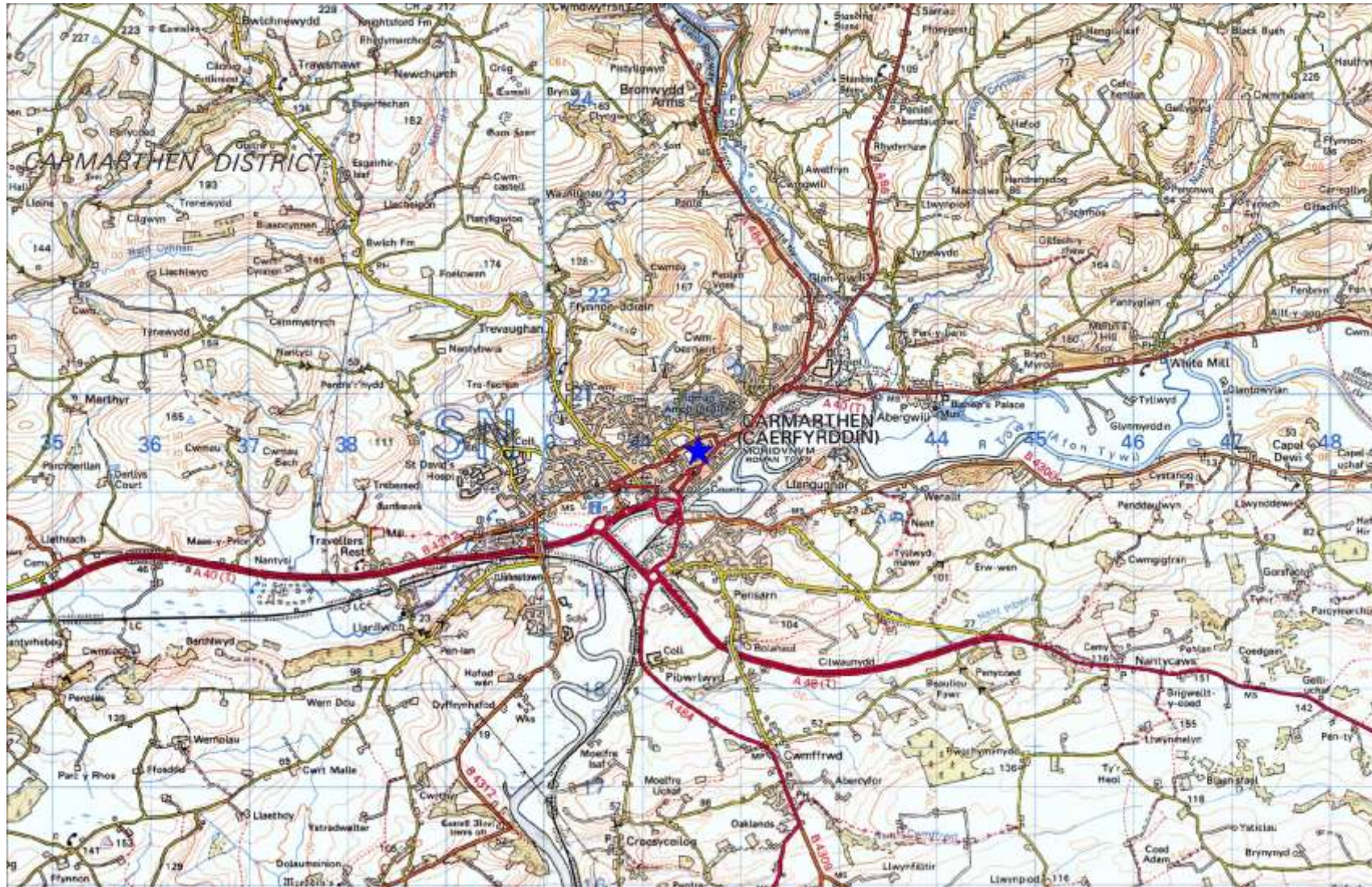


Figure 1: Location map for Carmarthen Football Ground, Carmarthen, Carmarthenshire (blue star at centre)

2003 Ordnance Survey 1:50,000 scale Landranger Map with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright Dyfed Archaeological Trust, Corner House, 6 Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AE. Licence No 100020930

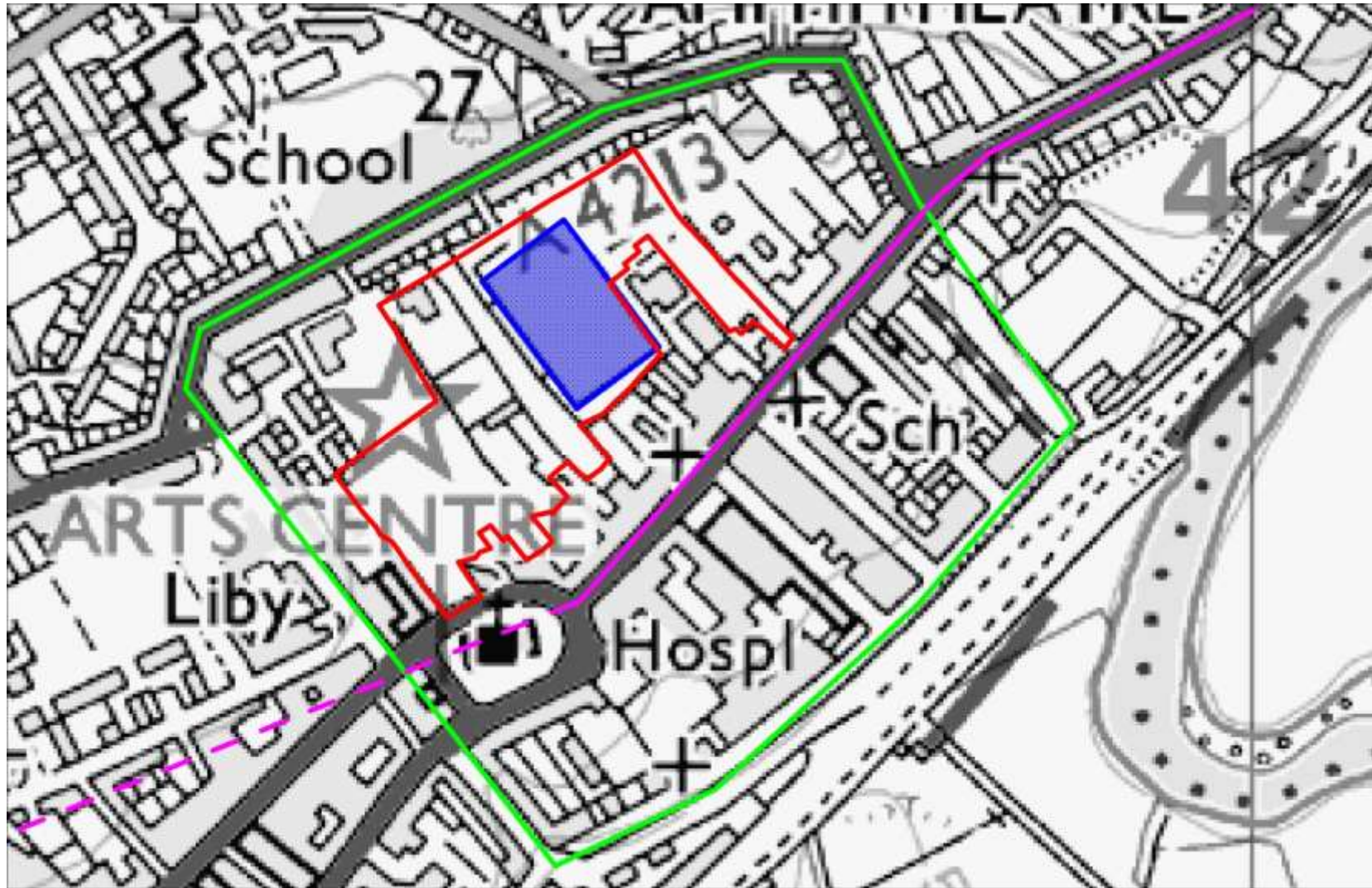


Figure 2: Location map for Carmarthen Football Ground (blue), also showing the outline of the scheduled area (red), the outline of Carmarthen Roman Town (green) and the main Roman Road (pink)

2003 Ordnance Survey 1:25,000 scale Landranger Map with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright Dyfed Archaeological Trust, Corner House, 6 Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AE. Licence No 100020930

2 THE SITE

2.1 Location

- 2.1.1 Carmarthen Football Ground is centred on NGR SN 41565 20435 (Figures 1 and 2), south of Richmond Terrace and north of Priory Street. Richmond Park Primary School lies to its east and St. Peter's Car Park to its west.
- 2.1.2 This area is to the east of the modern town centre but located in the middle of the old area of the Roman Town of Moridunum. It lies at a height of c.20m above OD.

2.2 Archaeological and Historical Background – Known Remains

- 2.2.1 The following sections provide a brief history of Carmarthen, which is described in more detail elsewhere (e.g. James 1980; James & James 2004; Austin *et al* 2005; James 2003).
- 2.2.2 The first known settlement in Carmarthen was a Roman fort, established sometime around 75 AD in the King Street/Spilman Street area (Figure 2). A new Roman road linked this fort with another in Llandeilo, and the current A40/Priory Street is believed to follow the line of this road (Figure 2). A small settlement, called a vicus, is likely to have built up outside the fort alongside this road. In Carmarthen this early settlement appears to have been concentrated around a temple at the western end of Priory Street, but by the AD150s streets and buildings were being laid out along Priory Street as the Roman town of Moridunum was established. The densest period of occupation appears to have been through the years AD150–200, which was shown during excavations on the site of Richmond Park primary school and St Peter's Car Park, where many of the Roman buildings were of earth and timber construction, including numerous shops and workshops.
- 2.2.3 In the 3rd century more elaborate stone houses were being constructed. By this time the town defences were well established and remained a prominent feature of the town throughout the medieval period, even being re-used during the 17th century Civil War, and are still visible in the layout of the current town. The line of Richmond Terrace, Old Oak Lane, The Esplanade and Parade, Parade Road and Little Water Street, perpetuates the line of these defences. Excavations at Church Street showed that the defences were substantial, comprising a clay bank fronted by ditches. The bank was later remodelled to take a stone facing.
- 2.2.4 A common feature of Roman towns is that burial took place outside the town walls, often located alongside a road leading from the city gates. Such a cemetery might well have continued in use for early Christian burials and may even have then developed into a medieval religious foundation. The ideal candidate in Carmarthen's case is the site of the medieval Priory east of the Roman town, itself built on the site of the early medieval clas (Welsh Christian church) of Llandeulyddog. Stone coffins, possibly of Roman date, from the vicinity of the Old Grammar School are known from antiquarian records. Another 'extra-mural' roadside site was the Amphitheatre. In 2001 a small-scale excavation uncovered early Roman cremation burials on the sloping ground just west of the Amphitheatre. In Roman times the Amphitheatre was probably used for a variety of purposes - games, parades, even religious festivals - and served as a focus for the region around Carmarthen as well as the town itself.
- 2.2.5 The early medieval clas of Llandeulyddog appears to be mentioned in the Welsh Laws, believed to be 8th century in date (possibly also referring to

earlier 6th century events), which includes a list entitled 'The Seven Bishop Houses of Dyfed'. These were small monasteries, one of which was Llan Teulydauc, which is likely to have been on the site that was later occupied by the medieval Priory of St John and St Teulyddog. Remains of this medieval Priory were uncovered during excavations in 1979 that also uncovered short stretches of three ditches, two of which produced 8th century radio-carbon dates, perhaps indicating that these were part of a bank and ditch enclosure around the Early Medieval site. These excavations also revealed part of the medieval Priory Church, giving an indication of the position of the church, some claustral buildings, including the Prior's House, and part of the cemetery. It is evident that the greater part of the Priory remains unexplored and that more survives below ground within the precinct boundary. 18th and 19th century map evidence also gives a good idea of the extent of the precinct around the medieval Priory. This Priory became one of the richest in Wales, noted for its almsgiving and hospitality to travellers as well as its learning. This may also have been the place where the famous Black Book of Carmarthen was written.

- 2.2.6 In the early 12th century the new Anglo-Norman lords built a castle and laid out a small defended town in front of the castle gates. The castle was established on the site of the present Guildhall, with the early town concentrated around the Guildhall/Notts Square and Quay Street area. The defences were later (around 1415) extended to incorporate development along King Street and Spilman Street with further undefended medieval development along Lammas Street. This town was however known as 'New Carmarthen', as an existing settlement, controlled by the clas, was spread out along Priory Street. It is unclear when this settlement was established; it may be one of the few sites in Britain to show a continuity of settlement following the collapse of Roman administration in the 5th century AD. The Anglo-Normans attempted to assert their control by establishing a Benedictine Priory at Llandeulyddog but 'Old Carmarthen' remained a separate settlement throughout much of the medieval period, being granted a charter by Henry II and exercising its own market rights. This market is likely to have been located at the junction of Priory Street and Old Oak Lane.
- 2.2.7 After the Dissolution of the Monasteries, Henry VIII amalgamated the two towns in 1546 incorporating the Borough with a Mayor and common council. With the closure of the Priory, land in the borough was freed up for redevelopment. The Priory became a secular residence, recorded as the mansion house of Lady Joyce Gamage, or Griffith Leyston, the archdeacon and then sheriff of Carmarthenshire in c.1587.
- 2.2.8 By the 18th century Carmarthen was still the largest town in Wales, although it was soon to be eclipsed by the new industrial boroughs to the east. The medieval mills of the old Priory had a blast furnace established near them in 1747 and tin mills were added in 1761. Many of the former Priory buildings were demolished shortly after 1760 when a leadworks was established on the site, no doubt making use of the availability of water that had originally been provided to the Priory. East Carmarthen thus took on a more industrial character. Demolition of the Priory buildings was completed during the 19th century with the arrival of the railway across the southern edge of the area. By this time the leadworks had already closed down (c.1800) and cottages had been established around the former gatehouse.

2.3 Archaeological and Historical Background – Previous Archaeological Investigations

- 2.3.1 A number of archaeological excavations and investigations have been undertaken within the Roman town of Moridunum, providing the archaeological information set out in the previous section. Figure 3 shows the locations of excavation and investigation undertaken between 1961 and 2013 within Moridunum. Of most relevance to this project are the investigations undertaken in and around the Football Ground since 1996.
- 2.3.2 A geophysical survey of the football pitch (and adjacent tennis courts) was undertaken by Geophysical Surveys of Bradford (1995; Figures 4 and 5). This indicated the presence of a Roman road crossing through the centre of the pitch, which had also shown as a parchmark on aerial photographs. A series of possible wall lines representing structures of probable Roman date were also recorded on either side of the road, as well as areas of burning, pits etc.



Figure 3: Map of Roman Carmarthen showing main areas of excavation and investigation undertaken between 1961 and 2013, including Carmarthen Town AFC Richmond Park (shaded green)- the changing rooms - and 131 Priory Street (shaded yellow)

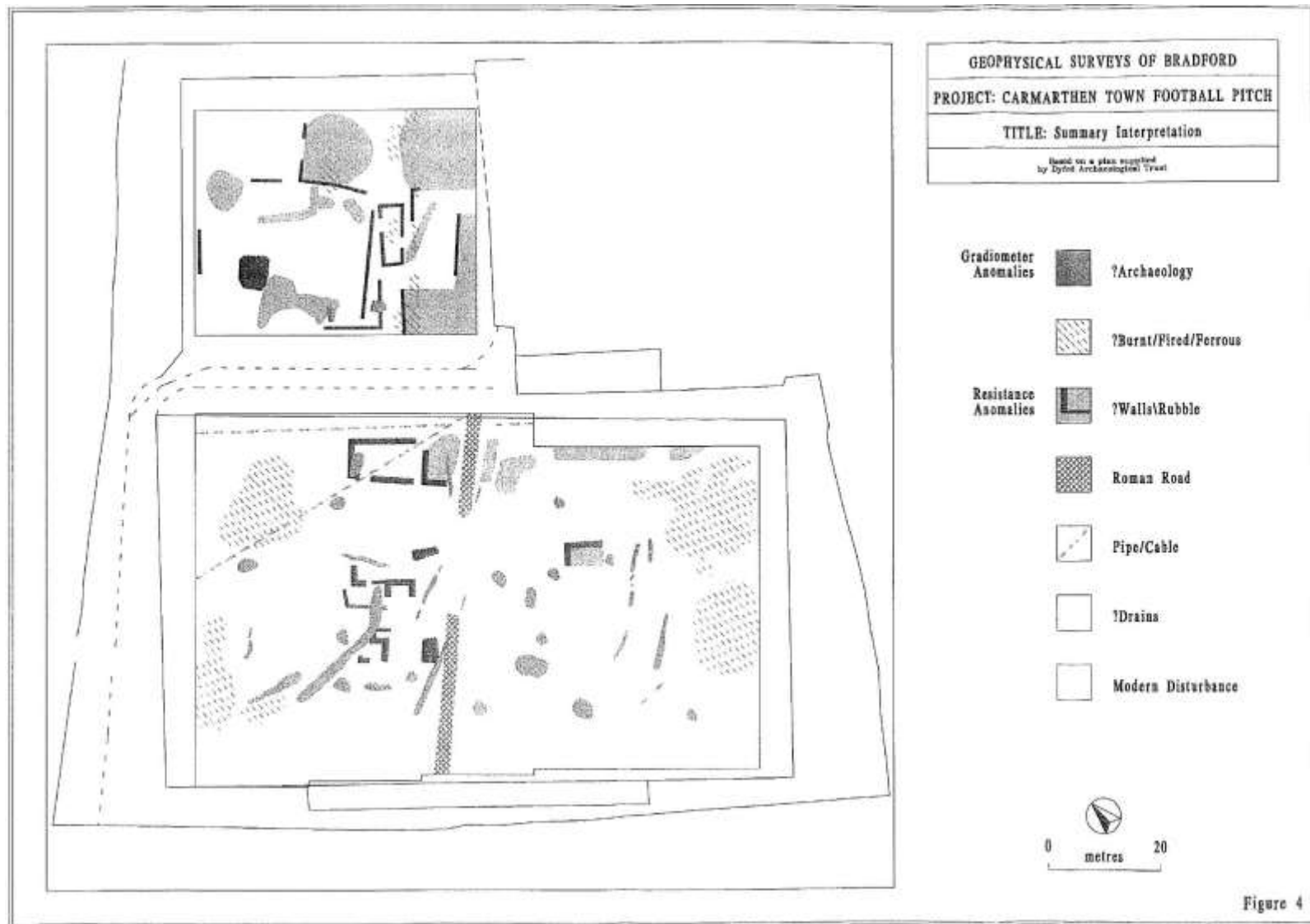


Figure 4: Results of the Geophysical Survey of the football pitch and adjacent tennis courts, undertaken by Geophysical Surveys of Bradford in 1995



Figure 5: Archaeological investigations associated with the Carmarthen Town AFC Richmond Park

The green lines represent the old pitch and former stand; the new stand to the west and the new changing rooms to the southwest. Identified Roman roads are shown in orange and the grey shaded areas are possible walls shown on the geophysical survey. Test pits (red) were investigated in 1996.

- 2.3.3 In 1996 eight test pits were excavated within the football ground around the perimeter of the pitch in advance of floodlight construction and soakways and recorded through an archaeological watching brief. The pit locations are shown in Figure 5. These pits identified Roman archaeological levels at depths of between 0.6m and 1.1m below the ground surface, with the Roman archaeology being generally higher towards the northern end of the pitch (Table 2).

Pit Number	Depth of Roman archaeology
Pit 1	1.1m depth
Pit 2	1.1m depth
Pit 3	1.1m depth
Pit 4	0.6m depth
Pit 5	0.8m depth
Pit 6	0.7m depth
Pit 7	0.7m depth
Pit 8	0.9m depth

Table 2: Depth of Roman archaeology observed in test pits ion 1996 (Figure 5)

- 2.3.4 Further archaeological observation was undertaken in 1998 during groundworks associated with drainage across the pitch area. Throughout the northern two thirds of the pitch area, Roman deposits were encountered at an average depth of 0.5m, but it was also noted that these rose to 0.1m below ground level in the centre of the site. The highest deposits would have been associated with the Roman road which crosses through the site area. Such features generally survive at a higher level than surrounding archaeology due to resurfacing and repairs throughout the Roman occupation of the town, resulting in a very strong and raised road surface. The depth of the drainage works in the southern third of the pitch was such that no archaeological deposits were revealed as they below the 0.78m depth of the drainage trenches.
- 2.3.5 In 2006 a new stand was constructed to the west of the former stand and four new floodlights were constructed on the western side of the pitch (these are not illustrated on Figure 5 as the plan of the works is not accurate). The southernmost floodlight base to the southwest of the pitch revealed Roman archaeology at a depth of 1.25m below the ground surface. A base south of the stand revealed Roman archaeology at a depth of 0.45m, that to the north of the stand, 0.48–0.60m, and that to the northwest at 0.5m depth. Further works on the stand recorded the continuation of the Roman road through the centre of the site at a depth of 0.31m below ground surface.
- 2.3.6 Investigations were carried out in 2012 and 2013 in advance of the construction of a new changing room block to the southwest of the football pitch. An evaluation in 2012 involved the excavation of a trench within the footprint of the proposed building. Roman archaeological levels were identified at around 1.1–1.2m below the present ground surface. The foundation design for the changing rooms was a raft foundation to be built across the footprint of the structure at a depth of 1m maximum to avoid disturbing the identified archaeological remains.

- 2.3.7 An archaeological watching brief was undertaken during the groundworks in 2013 that confirmed that the 1m depth for the foundations did not expose, damage or destroy significant archaeological remains, although in the northwestern part of the building footprint the remains of a Roman road were just exposed (Figure 5), again surviving at a higher level due to the nature of resurfacing and repair of the road.
- 2.3.8 In March 2015 The Earth Science Partnership (ESP) undertook a Dynamic Cone Penetration survey across the central part of the pitch area to determine the depth of surviving archaeological remains (further details in Appendix I). This was focussed on the line of the Roman road and did not target the lines of buildings or walls identified from the geophysical survey. The results of the survey indicated that *'Of the 41 test positions, the suspected Roman road was identified at some 13 positions'*.
- 2.3.9 Overall, the line of the Roman road was confirmed at depths of between 0.4–0.6m between the touchlines in the centre of the pitch (Figure 6). It was absent in the centre of the pitch, which concurred with the results of the previous geophysical survey and suggested that it had been removed by later activity. The survey showed a number of other obstructions within the football pitch, possibly walls. Areas where cone penetration was less could be softer archaeological deposits such as pits, mortar/beaten earth floors or general deposition layers.
- 2.3.10 In summary, Roman archaeological remains have been identified at depths of between 0.1m and 1.2m below the present ground surface. The Roman deposits are sealed by Post-Medieval and modern garden soils and levelling of low archaeological significance. The Roman remains survive at the highest levels where roads survive, with the areas between the roads where buildings were present (*insulae*) surviving at a lower level due to collapse or levelling of those remains in the Roman period and quarrying and reuse of the stone from the buildings in the medieval and Post-Medieval periods.

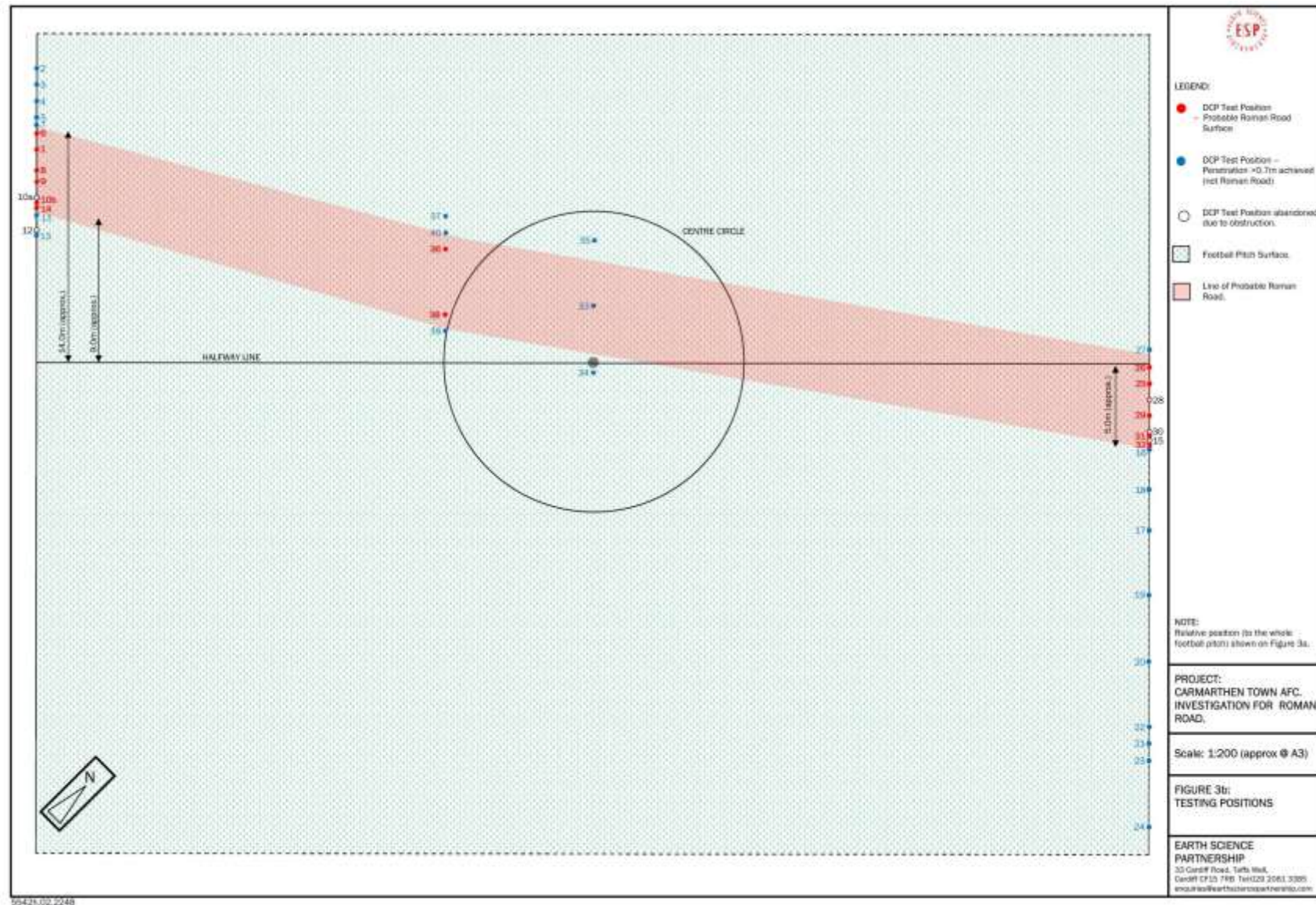


Figure 6: ESP DCP test locations, showing Roman Road in pink (plan supplied by client)

3 WATCHING BRIEF METHODOLOGY

3.1 Fieldwork

- 3.1.1 This watching brief was undertaken in accordance with the Chartered Institute for Archaeologists' (CIfA) Standard and Guidance for an Archaeological Watching Brief (2014). The Written Scheme of Investigation (see Appendix I for extracts), detailing the archaeological works proposed, was approved by Cadw prior to the works commencing.
- 3.1.2 Conditions were placed on the development by Cadw in their Scheduled Monument Consent. These conditions are detailed above and in Appendix I, along with the details of how these conditions were met by DAT and other contractors working at the site.
- 3.1.3 Great care was taken to ensure that archaeological deposits were not disturbed. Machining was undertaken with a flat bladed bucket to expose only the underlying garden soils beneath the former football pitch turf and make-up layer. The maximum depth of ground disturbance was determined prior to the works commencing, to avoid disturbing underlying remains. The existing underlying drainage was carefully removed by machine, so as not to cause any new disturbance to the ground. This was done using the same 'V' shaped profile bucket used when the original drainage was installed to minimise the disturbance to any underlying archaeological remains (Figure 7).
- 3.1.3 Recording of all archaeological features or deposits conformed to best current professional practice and was carried out in accordance with the Recording Manual² used by DAT Archaeological Services. A Trimble 5600 Total Station Theodolite was used to survey the ground perimeters, drainage ditches and the extent of the archaeological deposits exposed during the groundworks. All heights are relative to the top of the concrete path adjacent to the dug-out located on the east side of the ground.

3.2 Timetabling of Fieldwork

- 3.2.1 The watching brief took place over twelve days at Carmarthen Football Ground in June 2017, on the 6th-9th, the 12th – 14th, the 16th, the 19th - 21st, and the 23rd.

3.3 Post-Fieldwork Reporting and Archiving

- 3.3.1 All data recovered during the fieldwork will be collated into a site archive structured in accordance with specifications in Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation (Brown 2011), and the procedures recommended by the National Monuments Record, Aberystwyth.
- 3.3.2 The results of the fieldwork have been assessed in local, regional and wider contexts. The report includes a desk-based research element to ensure that the site is placed within its wider archaeological context.
- 3.3.3 A report fully representative of the results of the fieldwork has been prepared.

² DAT Archaeological Services has adopted the Recording Manual developed by English Heritage Centre for Archaeology. A copy will be available on-site for inspection if required.

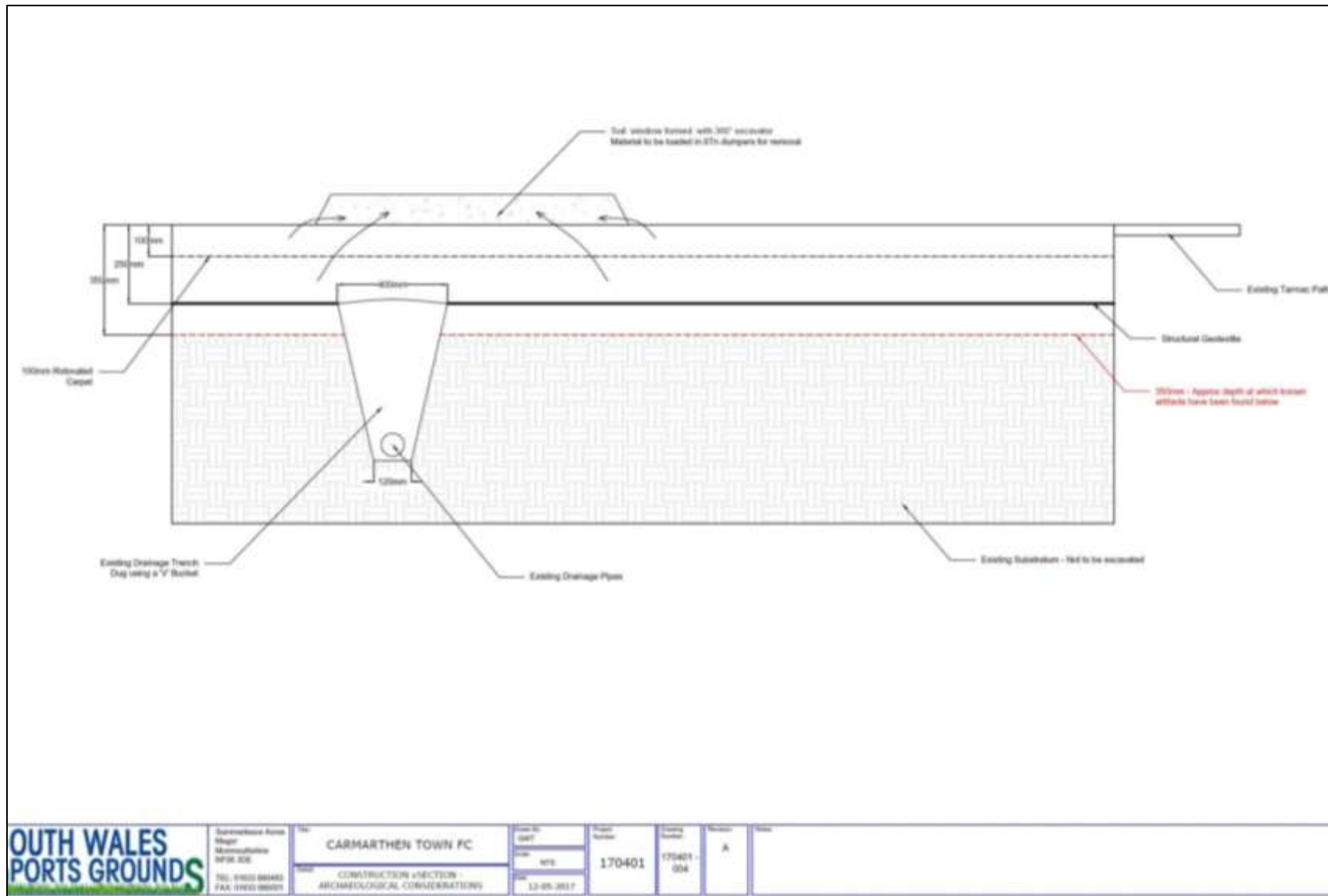


Figure 7: Section of construction depths supplied by client

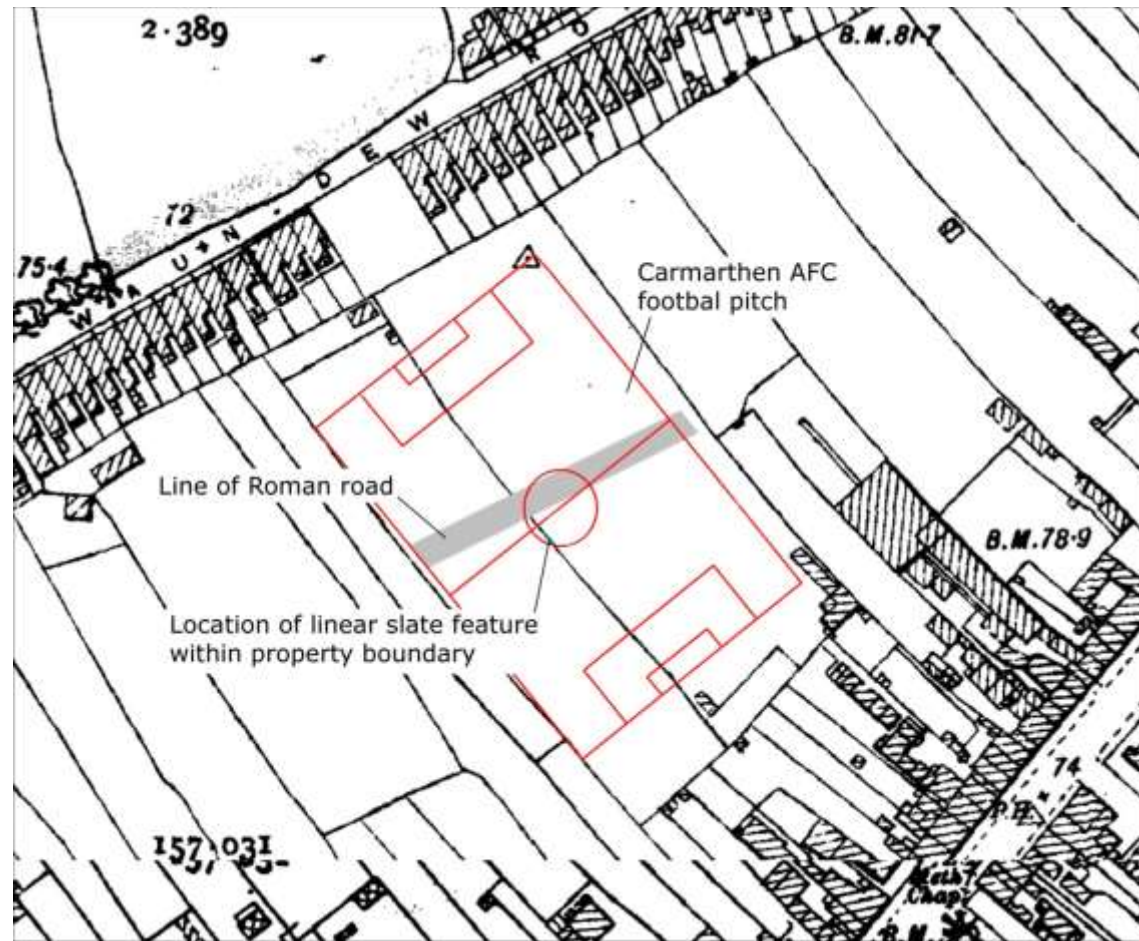


Figure 8: Carmarthen AFC football pitch in relation to OS 2nd edition 1906 map.

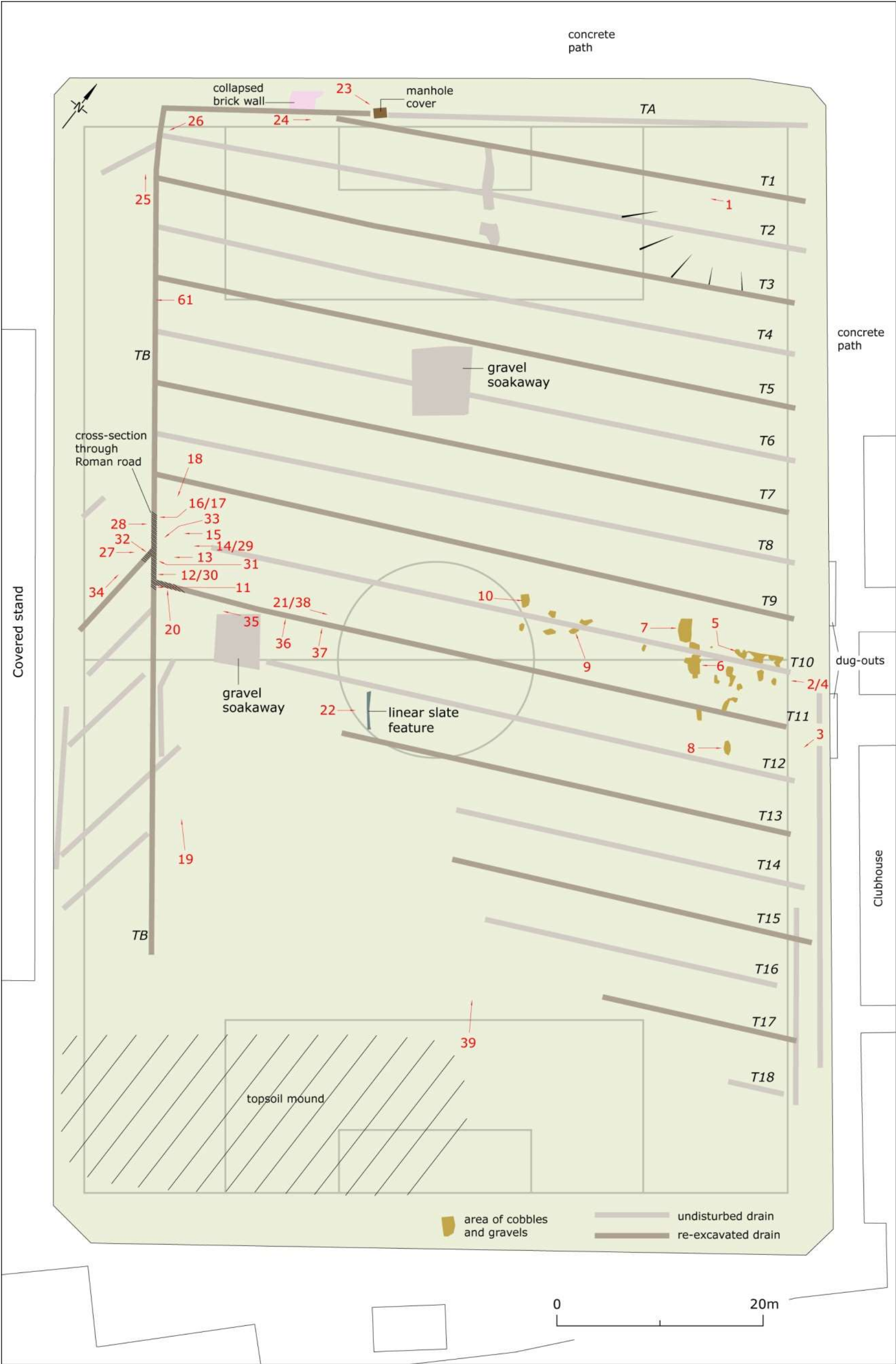


Figure 9: Plan showing archaeological deposits and drainage trenches revealed during watching brief. Red numbers and arrows indicate direction of photos referred to in the report.

4 RESULTS AND DISCUSSION

- 4.1 The following text relates to two periods during the watching brief. The first period (6th June to 16th June) refers to the initial topsoil stripping and the removal of stone aggregate (but not the perforated pipes) from drainage trenches *TB* and *T11*. The second period (June 19th to June 23rd) concerns the removal of the perforated pipes from *TB* and *T11* and also the complete re-excitation of the rest of the selected existing drainage trenches.

6th – 16th June 2017

- 4.2 Before the turf and topsoil was removed an area of turf was rotavated into the underlying topsoil to a depth of 0.1m. The soil was lifted using a 360 degree excavator and removed from the site by 6 ton dumper trucks fitted with non-cleat flotation tyres. The soil was removed down to the top of the underlying garden soil. The average depth of soil removed was between 0.15m and 0.20m. A slight hollow within the garden soil at the NE corner of the ground increased the depth of topsoil removed to approximately 0.35m. A collapsed brick wall and the tops of stone-filled drains were observed at the surface of the exposed garden soil (Photo 1).



Photo1: View SW across exposed garden soils at the northern edge of the ground during topsoil stripping (Figure 9).

- 4.3 Heavy rain prevented the middle of the ground being stripped on the 8th June. It was therefore decided to work at the edges of the ground. A 14m wide corridor was stripped adjacent to the east side of the ground. Close to the half-way line and extending towards the middle of the ground, small areas of cobble, pebbles and gravels were revealed. The exposed areas were within the Roman road shown on the geophysical survey and are doubtless associated with the road make-up, with the possibility that outlying patches are associated with yards or lanes contemporary with the Roman road or a later period (Photo 2).



Photo 2: View SW during topsoil stripping. Exposed cobbles and gravels associated with the Roman road can be seen in the foreground (Figure 9).
1m scale.



Photo 3: View South. Linear features are exposed drainage trenches. Background shows the stockpiled topsoil prior to removal (Figure 9).



Photo 4: View SW after completion of topsoil stripping. Roman road material can be seen in the foreground. 2x1m scales

- 4.4 The area of discrete patches of cobble, pebble and gravels were on the eastern side of the ground, with a smaller area of discrete patches of material towards the centre of the ground (Figure 9, Photos 4 to 10). They stood approximately 0.15m below the former pitch surface and 0.55m below the top of the adjacent concrete path bedside the dug-out. The overall length of the largest area measured approximately 10m long and in the main was approximately 8m wide (Photo 3).
- 4.5 The areas of cobbles, pebbles and gravels within the width of this 8m band can with some confidence be attributed to the Roman road, but other patches lying outside this band might be associated with other features either contemporary with the road or of a later period.
- 4.6 Three metres to the SW of the main band of road material, a small area of gravels and pebble was revealed. Its distance from the road suggests it might be associated with a hard surface such as a yard contemporary with the road.
- 4.7 From the centre of the ground to its western edge no cobbles, pebbles or gravels were exposed at the interface between the topsoil and the garden soil. The depth of Roman road must thus have been below the formation depth for the new pitch on its western side.
- 4.8 It was decided by the site contractors to remove the stone aggregate and perforated pipe from every other one of the existing drainage trenches inserted in 1996 for reuse with the insertion of new pipes and clean stone. Three of these drainage trenches ran through the Roman road; one of them traversed the road at a right angle (*TB*), the other two (*T10* and *T11*) cut the road at a shallow angle. *T11* was deemed to have had the least impact on the road material when it was originally cut and this was selected to be opened (Figure 9). All of the selected drains were opened using a V-shaped trenching bucket similar in profile to the original one used to cut the ditches.



Photo 5: View NE towards dug-out, showing area of pebbles and gravels associated with the Roman road. 1m scale (Figure 9).



Photo 6: View SW across patch of exposed cobble and gravels. Note modern drain *T10* (dark band) to the right of the 1m scale (Figure 9).



Photo 7: View NE across an exposed area of smaller, more angular stone. 1m scale (Figure 9)



Photo 8: View NE. Outlier of exposed cobble and gravels located approximately 3m south of the main band of material. 1m scale (Figure 9)



Photo 9: View NW across patch of exposed cobble situated near centre of ground. 1m scale (Figure 9).



Photo 10: View NE of exposed cobbles situated near centre of ground.
1m scale (Figure 9).

- 4.9 At the Western side of the ground, approximately 9m inside the pitch, another stone-filled drain (*TB*) which cut the Roman road at a right angle, was emptied of stone aggregate. This exposed a shallow cross-section through the road approximately 6.7m wide and up to 0.25m deep, consisting of cobble and gravels. The highest point of the section lay approximately 0.35m below the original pitch surface and 0.75m below the top of the adjacent concrete path below the terraces. It was observed that both ends of the section sloped down as if cambered. The centre of the section had been breached by a stone drain entering from the west. A fragment of Roman brick/tile, sealed within the road make-up, was recovered from the section (photos 16/17) - photos of the section through the Roman road are shown in sequence from photos 11 to 16, beginning at the SE end of the section.
- 4.10 A small section of the Roman road, approximately 1.5m long by 0.2m deep was revealed during the operation to empty *T11* where it joined with *TB* at its western end revealing a conglomeration of gravels and cobble (figure 9, photo 20).
- 4.11 During topsoil stripping, roughly three metres south of the halfway line and within the western half of the centre circle, a fragmented, linear slate feature 3.7m long and 0.3m wide was observed on the surface and within the garden soil. When the surveyed plan of the development site was superimposed onto the OS 2ND edition 1906 map the slate linear tallied with a boundary line running down the long axis of the pitch (figure 9, photo 22).



Photo 11: View SW at SE end of section through Roman road in *TB* (Figure 9). 1m and 0.5m scales.



Photo 12: View SW – detail of cross section through Roman road in *TB* (Figure 9). 1m and 0.5m scales.



Photo 13: View SW – detail of cross section through Roman road in *TB* (Figure 9). 1m and 0.5m scales.



Photo 14: View SW – detail of cross section through Roman road in *TB* (Figure 9). 1m and 0.5m scales.



Photo 15: View SW – detail of cross section through Roman road in *TB* (Figure 9). 1m and 0.5m scales.



Photo 16: View SW at NW end of section through Roman road; note Roman brick/tile fragment (Figure 9). 1m and 0.5m scales.



Photo 17: View SW – close-up of Roman brick/tile fragment sealed within road.
(Figure 9) 0.5m scales.



Photo 18: View SW at whole of Roman road section revealed in *TB*
(Figure 9). 2x1m scales



Photo 19: View NW along re-excavated drainage trench *TB* (Figure 9).



Photo 20: View NW showing small section of Roman road at west end of *T11* (Figure 9). 1m scale.



Photo 21: View west along drainage trench *T11* after re-excavation. 1m scale



Photo 22: View NE at remnant of slate linear corresponding with boundary on the OS 2nd edition 1906 map (Figures 8 and 9) 1m scale.

- 4.12 Excavation began next to an out-of-use concrete-lined and covered drain near to the north edge of the pitch (Photos 23 and 24). Excavation of the drainage channel running SW away from the drain was completed, as well as that of the short diagonal drain in the northwest corner of the pitch and the northern part of the main NE-SW drain (Photos 25 and 26). No archaeological features were observed.



Photo 23: View east at re-excavated drainage trench *T1* (Figure 9). 1m scale.



Photo 24: View northeast along re-excavated drainage trench *TA* (figure 9). 1m scale



Photo 25: View NW along northern end of re-excavated drainage trench *TB* (figure 9). 1m scale



Photo 26: View south along re-excavated drainage trench at northern end of *TB* (Figure 9). 1m scale

22nd June 2017

- 4.13 Re-excavation of the drainage channels in the vicinity of the Roman road was completed on this day. Fragments of Roman brick and pottery were present in the sides of the trenches which were starting to fall out due to the dry weather. These were collected to prevent loss. Some of the stones making up the Roman road also became unstable in the dried trench sections, but loss was low level. Photos 27 to 33 show sections through the Roman road along the main NW-SE drainage trench (*TB*).



Photo 27: View NE at detail of section of Roman road in *TB* (Figure 9). 1m scale



Photo 28: View NE at detail of section of Roman road in *TB* (Figure 9). 1m scale



Photo 29: View SW at detail of section of Roman road in *TB* (Figure 9). 1m scale



Photo 30: View SW at detail of section of Roman road in *TB* (Figure 9). 1m scale

- 4.14 West of the main NW-SE drainage channel, a short diagonal drainage run was re-excavated. This also exposed the Roman road in section (photos

31 and 32). Views along this short channel are shown in photos 33 and 34.



Photo 31: View SW at section of Roman road where TB meets diagonal drainage trench (Figure 9). 1m scale



Photo 32: View NE at section of Roman road in diagonal drainage trench (Figure 9). 1m scale



Photo 33: View south along re-excavated drainage trench cutting through the Roman road (figure 9). 1m scale



Photo 34: View north along T11 during re-excavation of trench (figure 9).

- 4.15 The Roman road was also seen in the sides of the long NW-SE drainage channel (*TB*) that ran roughly parallel to it. At the NW end of this channel the road was clear to see (Photo 35) but further SE it appeared only in places (its projected line diverges from that of the channel) and it may be that the stone seen belonged to other structures (Photos 36 and 37). Photo 38 shows the view SE along the channel after its complete re-excitation, and Photo 39 shows a final overview of part of the works as they neared completion. At this point many of the drainage channels had already been re-laid with new pipe and backfilled with gravel.



Photo 35: View SW along west end of *T11* after re-excitation of trench (Figure 9). 1m scale



Photo 36: View NW at detail of section of Roman road in *T11*
(Figure 9). 1m scale



Photo 37: View NW at detail of section of Roman road in *T11*
(Figure 9). 1m scale



Photo 38: View NE along re-excavated drainage trench T11. 1m scale



Photo 39: View NW across the eastern half of the pitch during near completion of groundworks (Figure 9).

5 CONCLUSIONS

- 5.1 The replacement of the old football pitch with a new 3G surface at Carmarthen football ground was carried out with negligible disturbance to underlying archaeological deposits. The football pitch lies within the scheduled area which covers part of the Roman town of Moridunum. Scheduled Monument Consent was granted for the works which highlighted the importance of the archaeology and its consideration within the conditions attached to consent.
- 5.2 The methodology for the pitch construction was developed in conjunction with DAT Archaeological Services to ensure that the works would cause no threat to the underlying archaeological remains. The methodology developed was laid out in the written scheme of investigation (Appendix 1) but in summary ensured that: the topsoil stripping was done to an agreed level above the known depth of archaeology, and that machines did not run on the exposed surface; all topsoil stripping was to be done under constant archaeological supervision; new drainage trenches were to reuse the existing ones; the surface was then to be covered with a geotextile membrane before formation material was laid on top (being pushed onto the site to prevent vehicles running over the exposed surface). The final pitch surface would be laid on top of this make up layer without the need for further archaeological observation.
- 5.3 The removal of the turf and topsoil revealed that dark, garden soils covered the majority of the ground surface. Roman deposits intruded through the surface on the east side of the ground within the confines of the Roman road as predicted by the geophysical survey carried out in 1995 by Geophysical Surveys of Bradford and more recent ground investigations. The road surface was not exposed on the western side of the site area.
- 5.4 The exposed road deposits consisted of discrete areas of cobble, pebbles and gravels and were analogous with archaeological deposits exposed during the excavation of the original drainage trenches in 1998. They were located 0.15m beneath the surface of the original pitch and 0.55m below the concrete path beside the dug-out to the east. The road was formed of successive layers of road surfaces, make-up and resurfacing layers leading to it surviving at a significantly higher level than Roman archaeological deposits to either side. The road surface was exposed, but not dug into by the works.
- 5.5 Predictably, re-excavation of the drainage trenches that were installed in 1998 within the confines of the Roman road exposed similar deposits as those uncovered during the previous watching brief. These deposits were seen in section, the most informative of which cut across the road within trench *TB* (Photos 11 to 17 and 27 to 33). This clearly showed the gravels, pebbles and cobbles which constituted the road make-up. The edges of the exposed road exhibited a slight camber but no roadside ditches were visible, presumably lying well below the level of the exposed ground surface. Sealed within the road make-up and former surfaces was a large piece of Roman brick/tile.
- 5.6 A number of finds of Roman origin and later were recovered during the watching brief. Most of these were unstratified having been recovered from the surface of the garden soil or loose within the drainage trenches. However a number were retrieved from the exposed Roman road sections in the drainage trenches and included pieces of Roman brick/tile, amphorae and Samian ware. Decoration is visible on some of the fragments.

- 5.7 A 3.7m by 0.3m piece of thick, partially crushed slate lay within the garden soils towards the centre of the ground. This was found to be a remnant of a former post-medieval boundary wall when the surveyed information was superimposed onto the OS 2nd edition 1906 map.
- 5.8 Overall the archaeological mitigation strategy developed by DAT Archaeological Services and South Wales Sports Grounds Ltd has ensured that the conditions placed on Scheduled Monument Consent by Cadw were adhered to. The works were carried out as agreed within the contractors scheme of works and the written scheme of investigation prepared by DAT Archaeological Services and approved by Cadw. Archaeological remains of the Roman road were exposed within the drainage trenches and only a few areas on the stripped surface below the pitch (as was anticipated). The drainage trenches had been previously exposed and recorded when the original drains were laid in 1996. A number of finds of Roman and later date were recovered from the site, but the majority were unstratified. Only a few finds could be said to have come directly from the road make-up. The remains have subsequently been sealed below geo-textile membrane and imported porous stone material before the layers of the 3G pitch were laid down. The 3G pitch itself will require no further below ground maintenance..

6 SOURCES

Published

Brown, D. 2011. *Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation, Second Edition*. Reading: Institute for Archaeologists. Available at:

www.archaeologyuk.org/archives/aaf_archaeological_archives_2011.pdf

[Accessed 21/Jul/2016]

CIfA. 2014. *Code of Conduct*. Reading: Chartered Institute for Archaeologists.

Available at: archaeologists.net/sites/default/files/CodesofConduct.pdf

[Accessed 21/Jul/2016]

CIfA. 2014. *Standard and Guidance for an Archaeological Watching Brief*.

Reading: Chartered Institute for Archaeologists. Available at:

archaeologists.net/sites/default/files/CIfAS&GWatchingbrief_2.pdf [Accessed

21/Jul/2016]

James, H. 2003. *Excavations in Roman Carmarthen: 1973-1993*. Roman Society Publications (Britannia Monograph No. 20)

James, T. 1980. *Carmarthen: An Archaeological and Topographical Survey*.

Carmarthen: Carmarthenshire Antiquarian Society

Unpublished

Austin, L., Hill, C., James, H., James, T. and Poucher, P. 2005. *Carmarthen Historic Town Survey: Understanding and Protecting the Archaeology of Wales' Oldest Town*. DAT ERN 50946.

Geophysical Surveys of Bradford. 1995. *Carmarthen Roman Town: Report on geophysical survey of Football Pitch* (Unpublished report for DAT – copy held in the Dyfed regional HER, Shire Hall, Llandeilo).

James, H. and James, T. 2004. *Carmarthen: Understanding and Protecting the Archaeology of Wales' Oldest Town*. DAT report no. 2004/17.

Database

Dyfed Archaeological Trust Historic Environment Record, housed with Dyfed Archaeological Trust at Corner House, 6 Carmarthen Street, Llandeilo, Carmarthenshire, SA19 6AE

APPENDIX I

EXTRACTS OF THE ARCHAEOLOGICAL WRITTEN SCHEME OF INVESTIGATION FOR CARMARTHEN TOWN AFC, RICHMOND PARK PITCH REPLACEMENT

1 INTRODUCTION

- 1.1 This written scheme of investigation (WSI) or specification for archaeological works has been prepared by DAT Archaeological Services for a watching brief to be undertaken during the replacement of the existing pitch with a third generation 3G pitch at the Carmarthen Town AFC football ground, Richmond Park, Carmarthen. The archaeological works have been commissioned by Mr Neil Belsham of South Wales Sports Grounds Contractors Ltd.
- 1.2 Carmarthen Town AFC football ground lies within the designated area of Scheduled Monument CM234 – Carmarthen Roman Town (Part of) (Figure 1). Following previous discussions with Cadw and based on the results of previous site investigation works and the development proposals, Scheduled Monument Consent (SMC) has been granted for the pitch replacement with conditions.
- 1.3 This WSI outlines the method by which DAT Archaeological Services will address the conditions of the Scheduled Monument Consent, as laid out in the letter dated 15/07/15 to Jonathon Lewis at Carmarthen Town Football Club. The conditions were as follows:

General

1. *that access to the site shall be afforded to representatives of Cadw;*
2. *that Cadw shall be given at least two weeks notice, in writing, of the date of commencement of the work or of any subsequent adjustment to allow Cadw's representative to monitor on site activity;*

Pre-construction

3. *That the applicant shall procure the services of a suitably qualified and experienced archaeologist whose name/company name shall be supplied to Cadw;*
4. *that a clear, written method statement is produced by the applicant and supplied to Cadw and to the applicant's contracted archaeologist. The method statement needs to lay out exactly the order in which operations need to be carried out, and the minimum depths of topsoil/overburden which can be removed;*
5. *the archaeologist shall be given all the paperwork and DCP results supplied for this application, together with a copy of this consent;*
6. *that an archaeological Written Scheme of Investigation (WSI) is produced in advance of works. The WSI needs to include, but is not limited to.*
 - *A watching brief whilst all turf and topsoil stripping is taking place. This should also include an agreed method statement with the applicant's contractors about the order in which areas will be stripped and a procedure for changing this order in the event that archaeological remains are uncovered which require more detailed recording and/or sampling;*
 - *The recording in plan of all archaeological features noted during the watching brief;*

- *A strategy for assessing and, if necessary, sampling and/or evaluating any features which cannot be preserved in situ. This strategy needs to include clear liaison with, and permission from, Cadw in these circumstances;*
 - *A strategy for sampling, should any features become exposed which may provide concrete dating evidence;*
 - *Post-excavation, reporting and, if appropriate, publication;*
7. *The WSI shall be provided to Cadw for signing off prior to commencement of any works;*
8. *It is the responsibility of the applicant to ensure that any and all contractors are fully briefed on the Scheduled status of this site, and of the constraints which this imposes. This responsibility may be discharged through toolbox talks and/or through written instructions or leaflets. The applicant may request that their archaeologist undertakes this task for them; such requests should be clearly documented to avoid any confusion about responsibilities.*

Please note that if a WSI and method statement cannot be produced and agreed between the applicant, the archaeological contractor and Cadw then works cannot begin on site.

During construction

9. *The provisions of the WSI shall be adhered to strictly;*
10. *The aim shall always be 100% preservation in-situ of archaeological remains. If this is not possible, the archaeological procedures laid out in the WSI shall be followed. Liaison with Cadw shall be required;*
11. *The only exception to the above would be if samples for dating are required and can be taken without causing substantive damage to the feature concerned;*

Post-construction

12. *That a copy of the report shall be sent to the RCHAMW (Gareth.Edwards@rcahmw.gov.uk), to the regional archaeological trust (M.Page@dyfedarchaeology.org.uk) and to Cadw (denise.harris@wales.gsi.gov.uk); and*
13. *That the site shall be left in a stable and tidy condition, to the satisfaction of the landowner and of Cadw.*

- 1.4 The written scheme of investigation is in accordance with the Standard and Guidance for Archaeological Watching Briefs (Chartered Institute for Archaeologists (CIfA), 2014).
- 1.5 DAT Archaeological Services has considerable experience of this type of project and always operates to best professional practice. DAT Archaeological Services is the contractual arm of Dyfed Archaeological Trust that has its own Health and Safety Policy, and all works are covered by appropriate Employer's Liability and Public Liability Insurances. Copies of all are available on request.
- 1.6 Dyfed Archaeological Trust is a CIfA Registered Organisation and all permanent staff are CSCS registered.

2.3 Results of the Dynamic Cone Penetration (DCP) Test Survey

2.3.1 In march 2015 The Earth Science Partnership (ESP) undertook a Dynamic Cone Penetration survey across the central part of the pitch area to determine the depth of surviving archaeological remains. This was focussed on the line of the Roman road and did not target the lines of buildings or walls identified from the geophysical survey.

2.3.2 The DCP test involved the driving of a 20mm diameter, 60 cone into the upper soil layers of the site and the depth of penetration for varying number of blows recorded (Information supplied by client from ESP DCP Test information). Resistance to the driven cone would be caused by underlying obstructions such as the surface of the Roman road, but could also have occurred through the presence of other obstructions (including walls, loose rubble or other detritus).

2.3.3 The results of the survey indicated that *'Of the 41 test positions, the suspected Roman road was identified at some 13 positions.*

On the south-western touchline, the probable road surface was located at six positions at depths of 0.4 to 0.6m, suggesting that it centred some 11.5m north-east of the centre line (where it meets the touchline) and is around 5.0m in width.

On the north-eastern touchline, the probable road surface was located at five positions at depths of 0.3 to 0.4m, suggesting that it is centred some 2.5m south-west of the centre line, and is around 5.5m in width.

In the central zone, the probable road was identified at two positions at depths of 0.4 to 0.55m, just west of the centre circle, in the area where it would be anticipated. Within the centre circle itself, no evidence of the road was identified at shallow depth – the road is shown to be absent in this area on the DAT plan.' (ESP information supplied by client)

2.2.4 Overall the line of the Roman road was confirmed at depths of between 0.4m – 0.6m between the touchlines in the centre of the pitch. It was absence in the centre of the pitch, which concurs with the results of the previous geophysical survey and would suggest it has been removed through later activity. The survey did show a number of other obstructions within the football pitch, but the possibility that these could represent further archaeology, such as walls, was not considered. The areas where cone penetration was less were recorded as 'terminating in natural soils', although this is unlikely to be the case at the depths of the penetration recorded and is more likely to be areas where softer archaeological deposits were encountered, such as pits, mortar/beaten earth floors or general deposition layers.

CARMARTHEN TOWN AFC, RICHMOND PARK

South-western Touchline		
DCP Test No.	Depth of Penetration (mm)	ESP Interpretation
DCP-1	406	Possible roman road surface.
DCP-2	766	Terminated in natural soils (not roman road).
DCP-3	719	Terminated in natural soils (not roman road).
DCP-4	865	Terminated in natural soils (not roman road).
DCP-5	884	Terminated in natural soils (not roman road).
DCP-6	532	Possible roman road surface.

DCP-7	876	Terminated in natural soils (not roman road).
DCP-8	407	Possible roman road surface.
DCP-9	425	Possible roman road surface.
DCP-10a	201	Shallow obstruction. Re-positioned to DCP-10b.
DCP-10b	559	Possible roman road surface.
DCP-11	917	Terminated in natural soils (not roman road).
DCP-12	204	Shallow obstruction. Re-positioned to DCP-13
DCP-13	831	Terminated in natural soils (not roman road).
DCP-14	598	Possible roman road surface.
North-eastern Touchline		
DCP Test No.	Depth of Penetration (mm)	ESP Interpretation
DCP-15	233	
DCP-16	736	Terminated in natural soils (not roman road).
DCP-17	902	Terminated in natural soils (not roman road).
DCP-18	914	Terminated in natural soils (not roman road).
DCP-19	900	Terminated in natural soils (not roman road).
DCP-20	921	Terminated in natural soils (not roman road).
DCP-21	601	Terminated in natural soils (not roman road).
DCP-22	836	Terminated in natural soils (not roman road).
DCP-23	903	Terminated in natural soils (not roman road).
DCP-24	856	Terminated in natural soils (not roman road).
DCP-25	303	Possible roman road surface.
DCP-26	399	Possible roman road surface.
DCP-27	260	Terminated in natural soils (not roman road).
DCP-28	865	Shallow obstruction.
DCP-29	345	Possible roman road surface.
DCP-30	220	Shallow obstruction. Re-positioned to DCP-31.
DCP-31	309	Possible roman road surface.
DCP-32	374	Possible roman road surface.
Central Pitch		
DCP Test No.	Depth of Penetration (mm)	ESP Interpretation
DCP-33	927	Terminated in natural soils (not roman road).
DCP-34	801	Terminated in natural soils (not roman road).
DCP-35	837	Terminated in natural soils (not roman road).
DCP-36	419	Possible roman road surface.
DCP-37	812	Terminated in natural soils (not roman road).
DCP-38	554	Possible roman road surface.
DCP-39	861	Terminated in natural soils (not roman road).
DCP-40	857	Terminated in natural soils (not roman road).

Table 3: Summary of Depths of Penetration at Test Positions (ESP Information supplied by Client)

Notes to the table from ESP:

1. Test positions highlighted in red represent probable location of the Roman road.
2. Test positions highlighted in blue represent positions away from the Roman road.

3. Test positions highlighted in black represent area where probable 'false positives' were identified.

Notes to the Table from DAT Archaeological Services

1. Test positions shown on Figures 6 and 7.
2. These readings were the interpretation states '*Terminated in natural soils (not Roman road)*' should just state that no Roman road was encountered and that it is still very likely that they have merely penetrated into softer archaeological levels.
3. The test positions recorded as being 'false positives' could actually represent archaeological remains such as walls or structures.

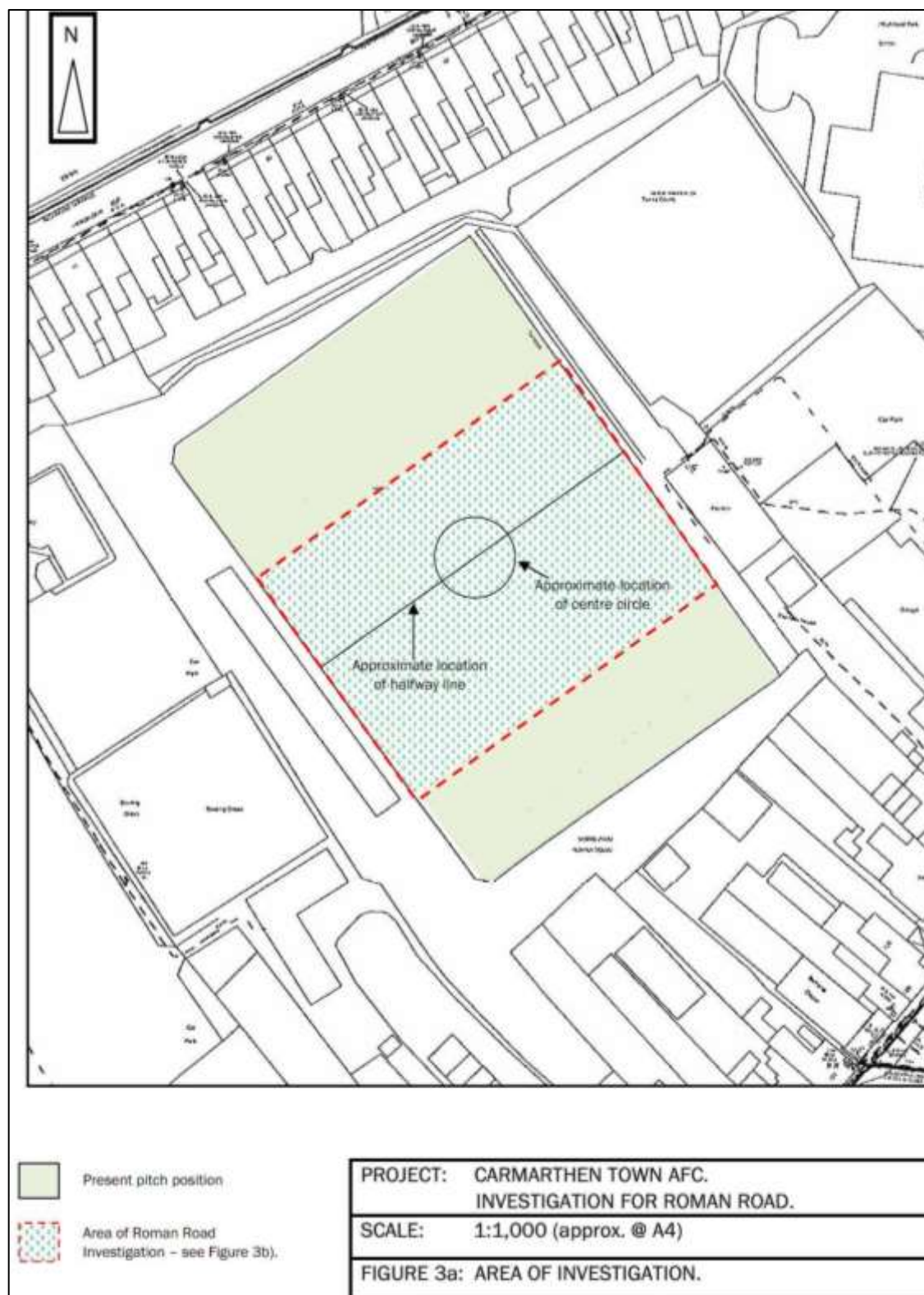


Figure 10: Plan of ESP DCP testing survey area (information supplied by client)

3. WATCHING BRIEF

3.1 The definition of archaeological watching brief, taken from the Chartered Institute for Archaeologists Standards and Guidance: for Archaeological Watching Briefs (CIfA S&G: AWB 2014) is a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, 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.

3.2 The purpose of a watching brief, as laid down in the CIfA S&G AWB is:

to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works;

to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment.

3.3 This document provides a scheme of works for:

Archaeological attendance and recording during groundworks associated with the replacement of the existing football pitch surface at Carmarthen Town AFC, Richmond Park, Carmarthen. The works will entail further detailed recording of remains in the event they are exposed. The works will also include the production of a report and archive of the results.

4 PROJECT OBJECTIVES

4.1 Provision of a written scheme of investigation to outline the methodology by which DAT Archaeological Services will undertake the archaeological watching brief.

- To monitor groundworks in order to identify the presence/absence of any archaeological deposits.
- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed groundworks.
- To appropriately investigate and record any archaeological deposits to be affected by the groundworks.
- To produce an archive and report of the results.

5. FIELDWORK

5.1 The watching brief would entail an archaeologist being present during all groundworks for which there is a potential for archaeological remains to be exposed, damaged or destroyed. This will involve the observation of the removal of the existing pitch surface and any other groundworks required.

5.2 It is essential coordination between the site contractor's and archaeologist is established at the outset to avoid any potential exposure of the archaeology without an archaeologist being present, or unnecessary visits

to the site when works are being carried out that do not require the presence of an archaeologist.

5.3 The on-site contractors must be fully aware of the following:

- The football pitch lies within the Scheduled Monument of Roman Carmarthen (Part of) CM234 and the importance of the archaeology and their responsibilities in respect of this;
- The maximum depths of ground disturbance must be adhered to;
- That the attending archaeologist has the authority to stop groundworks in the event that significant archaeology is exposed;
- If significant archaeology is exposed, that it must be left undisturbed prior to its archaeological recording and implementation of any further mitigation measures required;
- Adequate time must be made available to the visiting archaeologist to ensure that appropriate recording can be undertaken of any archaeological features or deposits exposed during ground works, even if this causes delays to the work programme.

5.4 The methodology for the pitch replacement and archaeological requirements will be undertaken as follows:

- Turf layer to be rotavated into underlying topsoil to a depth of no more than 100mm
 - No archaeological observation necessary;
- Topsoil is then to be stripped by 360 machine fitted with flat bladed bucket to leave windrows across the site. The depth of material removed will not exceed 0.35m – the majority of groundworks being undertaken within a depth of 0.25m (Figure 8);
 - **Constant archaeological observation necessary;**
- Topsoil will be removed from site using dumpers that be loaded beyond the pitch edges;
 - **Dumpers must not drive on the stripped area of the site,** filling of dumpers will not need to be observed;
- The windrows will then be cleared of topsoil using a 360 excavator loading into 6Tn dumper trucks fitted with non-cleat 'flotation' tyres designed to cause minimal disturbance to the underlying subsoil, with material being stockpiled off the area of the pitch for removal by lorries;
 - **Constant archaeological observation necessary;**
- The remaining depth of soil needed to be removed for the pitch will then be stripped by machine with flat bladed bucket;
 - **Constant archaeological observation necessary;**
- The existing underlying drainage will be carefully removed by machine, so as not to cause any new disturbance to the ground. This will be done using the same 'V' shaped profile bucket used when the original drainage

was installed to minimise the disturbance to any underlying archaeological remains (Figure 8);

- **Constant archaeological observation necessary;**
 - The old drainage material will be moved to the edges of the pitch and removed by dumpers;
 - No archaeological observation necessary;
 - New drains will be laid with new stone backfill;
 - No archaeological observation necessary;
 - The new 3G pitch will then be constructed on top of the ground surface requiring no further below ground disturbance starting with the exposed area being covered with geotextile membrane and Type 3 porous material will be layered on top of this – with earth moving machinery accessing from a single point so as not to track across the geotextile;
 - No archaeological observation necessary.
- 5.5 Archaeological observation will entail an archaeologist being present on-site during all stages of the groundworks as identified above. The archaeologist will observe the stripped surfaces and identify any archaeological remains which may be exposed.
- 5.6 The proposed works should not theoretically expose archaeological remains, although in the event that they do, any such remains will need to be appropriately recorded prior to them being covered over by the new pitch.
- 5.7 In the event that archaeological remains are exposed at a level or in a location where the groundworks for the proposed new 3G pitch will require their full or partial removal, the attending archaeologist will need to halt further groundworks in that area until such a time as the client, Cadw, the site contractors and DAT Archaeological Services can determine the best way of dealing with the remains. This could include more detailed excavation prior to removal, with a team of archaeologists in a programme of work additional to the watching brief.
- 5.8 Recording of all archaeological features or deposits will conform to best current professional practice and be carried out in accordance with the Recording Manual³ used by DAT Archaeological Services. Significant archaeological features or deposits will be drawn at a suitable scale (no less than 1:20) and photographed in an appropriate format.
- 5.9 All archaeologically significant finds will be retained and, where possible, related to the contexts from which they derived. Finds will be temporarily stored by DAT Archaeological Services in stable conditions. All finds, except those deemed to be Treasure, will remain the property of the landowner.
- 5.10 Under the 1996 Treasure Act, “treasure” can be summarised as:
- Any object other than a coin containing at least 10% gold or silver and at least 300 years old;
 - Any prehistoric assemblage of base metal;

³ DAT Archaeological Services have adopted the Recording Manual developed by English Heritage Centre for Archaeology. A copy will be available on-site for inspection if required.

- Coins found together which contain 10% gold or silver (but no single coins) and groups of at least 10 coins of other metals, provided they are at least 300 years old;
 - Any object found associated with treasure except unworked natural objects; and
 - Any object which would have been Treasure Trove before the 1996 Act but not covered above.
- 5.11 Where significant material is recovered that is suitable for dating the archaeological remains, such as charcoal for radiocarbon dating or artefacts, these should be collected from site. Contingency sums may be required to undertake any such dating following agreement with Cadw and the client.
- 5.12 In the event that unforeseen archaeological discoveries are made during the pitch replacement, or that archaeological remains of high significance are exposed, DAT Archaeological Services shall have the power to halt any ground works in these areas and shall inform the client, site contractors and Cadw, and prepare a written statement with plan detailing the archaeological evidence. The area will be demarcated and further archaeological mitigation may need to be implemented additional to the watching brief.
- 5.13 In the unlikely event that human remains are encountered, the District Coroner's Office and the Police will be notified immediately. All human remains will, where possible, be left *in situ*. If preservation *in situ* is not possible all statutory permissions will be obtained in writing before removal begins.

6. POST-FIELDWORK REPORTING AND ARCHIVING

- 6.1 All data recovered during the evaluation will be collated into a site archive structured in accordance with the specifications in *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (Brown 2011), and the procedures recommended by the National Monuments Record, Aberystwyth. The *National Standards for Wales for Collecting and Depositing Archaeological Archives* produced by the Federation of Museums and Art Galleries of Wales will also be adhered to. Digital archives will be collated using the Royal Commission on the Ancient and Historical Monuments of Wales systems (2015) and deposited with the RCAHMW.
- 6.2 The results of the fieldwork will be assessed in local, regional and wider contexts. The report will include a desk-based research element to ensure that the site is placed within its wider archaeological context. A report that is fully representative of the results of the fieldwork will be prepared.
- 6.3 DAT Archaeological Services will arrange for the deposition of finds, and ascertain the costs of storage and deposition, with an approved body before the project commences and inform the curator of the arrangement which has been made (it is anticipated that the paper and digital archive will be deposited with the Royal Commission on the Ancient and Historical Monuments of Wales and any finds with Carmarthen Museum).
- 6.4 A summary of the project results, excluding any confidential information, may be prepared for wider dissemination (e.g. Archaeology in Wales and special interest and period-specific journals).

- 6.5 A digital copy and two bound copies of the reports will be produced for the client. Digital copies of the report will be supplied to Dyfed Archaeological Trust - Historic Environment Record, Cadw and RCAHMW.

7 ADDRESSING SMC CONDITIONS

- 7.1 The following section details how the watching brief methodology and development process will address the specific conditions placed upon the Scheduled Monument Consent.

General Conditions

1. *that access to the site shall be afforded to representatives of Cadw – this will be done through allowing Cadw staff access to monitor the pitch replacement works and watching brief;*
2. *that Cadw shall be given at least two weeks' notice, in writing, of the date of commencement of the work or of any subsequent adjustment to allow Cadw's representative to monitor on site activity – Cadw will need to approve this WSI before the works can commence and this will represent the 'at least two weeks' notice' required for the start of works. As stated above, Cadw will be allowed access to the site to monitor the works;*

Pre-Construction Conditions

3. *That the applicant shall procure the services of a suitably qualified and experienced archaeologist whose name/company name shall be supplied to Cadw – This WSI confirms that DAT Archaeological Services will be undertaking the archaeological works on-site, a CIfA Registered Organisation. The project will be managed by J Meek MCIfA and on-site staff will be allocated from the experienced staff of DAT Archaeological Services.*
4. *that a clear, written method statement is produced by the applicant and supplied to Cadw and to the applicant's contracted archaeologist. The method statement needs to lay out exactly the order in which operations need to be carried out, and the minimum depths of topsoil/overburden which can be removed – A detailed method statement for the pitch replacement works has been provided to DAT Archaeological Services which was used during the production of this WSI;*
5. *the archaeologist shall be given all the paperwork and DCP results supplied for this application, together with a copy of this consent – DAT Archaeological Services can confirm that they have been provided both with the detailed DCP results and the SMC consent, which are referenced within this WSI;*
6. *that an archaeological Written Scheme of Investigation (WSI) is produced in advance of works. The WSI needs to include, but is not limited to:*
 - *A watching brief whilst all turf and topsoil stripping is taking place. This should also include an agreed method statement with the applicant's contractors about the order in which areas will be stripped and a procedure for changing this order in the event that archaeological remains are uncovered which require more detailed recording and/or sampling;*
 - *The recording in plan of all archaeological features noted during the watching brief;*
 - *A strategy for assessing and, if necessary, sampling and/or evaluating any features which cannot be preserved in situ. This strategy needs to*

include clear liaison with, and permission from, Cadw in these circumstances;

- *A strategy for sampling, should any features become exposed which may provide concrete dating evidence;*
 - *Post-excavation, reporting and, if appropriate, publication; - This document provides the methodologies to be implemented to address each of the above bullet points;*
7. *The WSI shall be provided to Cadw for signing off prior to commencement of any works – the WSI will be provided to Cadw for approval prior to any works being undertaken at the site;*
8. *It is the responsibility of the applicant to ensure that any and all contractors are fully briefed on the Scheduled status of this site, and of the constraints which this imposes. This responsibility may be discharged through toolbox talks and/or through written instructions or leaflets. The applicant may request that their archaeologist undertakes this task for them; such requests should be clearly documented to avoid any confusion about responsibilities – The Earthworks and Drainage Method Statement for the works has been commented on and the above requirements have been added;*

During Construction Conditions

9. *The provisions of the WSI shall be adhered to strictly – the attending archaeologist will ensure that the provisions of the WSI are adhered. If any issues arise then the manager at DAT Archaeological Services (James Meek) should be contacted as well as the appointed representative at Cadw, Neil Belsham from South Wales Sports Grounds and the site foreman. ;*
10. *The aim shall always be 100% preservation in-situ of archaeological remains. If this is not possible, the archaeological procedures laid out in the WSI shall be followed. Liaison with Cadw shall be required – the attending archaeologist will ensure that if any archaeological remains are exposed by the works that they are initially recorded and left in-situ until such a time as the client and Cadw have been consulted on how best to deal with the remains before any further stage of archaeological excavation is undertaken.*
11. *The only exception to the above would be if samples for dating are required and can be taken without causing substantive damage to the feature concerned – such samples could relate to concentrations of charcoal suitable for radiocarbon dating, or artefacts which could be used for dating;*

Post-Construction Conditions

12. *That a copy of the report shall be sent to the RCHAMW (Gareth.Edwards@rcahmw.gov.uk), to the regional archaeological trust (M.Page@dyfedarchaeology.org.uk) and to Cadw (denise.harris@wales.gsi.gov.uk) – This condition is dealt with in the report under reporting; and*
13. *That the site shall be left in a stable and tidy condition, to the satisfaction of the landowner and of Cadw – this refers both to the buried archaeology which will be preserved in situ beneath the area and the new pitch.*
- 7.2 *The SMC conditions also include the following caveat: Please note that if a WSI and method statement cannot be produced and agreed between the applicant, the archaeological contractor and Cadw then works cannot begin*

on site. It is thus of the utmost importance that the required information regarding the methodology of the pitch replacement and the WSI are submitted to Cadw as early as possible in order that any issues can be dealt with as quickly as possible.

8 STAFF

- 8.1 The project will be managed by James Meek MCIfA, Head of DAT Archaeological Services, who has considerable experience of excavating Roman urban sites.
- 8.2 The on-site works will be undertaken by experienced archaeologists at DAT Archaeological Services, all with CSCS cards.
- 8.3 If required environmental remains will be looked at by Catherine Griffiths (University of Wales Trinity St David).
- 8.4 Roman ceramics will be identified and analysed by Dr Peter Webster.
- 8.5 Identification and conservation of metal / bone / leather objects will be undertaken by the National Museum of Wales if required.
- 8.6 Animal bone will be identified by Alice Day of DAT Archaeological Services.

9 MONITORING

- 9.1 The pitch replacement works and watching brief will need to be monitored by the Cadw Inspector who should be afforded access to the site at all reasonable times during the project.
- 9.2 The Head of DAT Archaeological Services will also require access to monitor the watching brief and liaise with the clients and site contractors.

10 HEALTH AND SAFETY

- 10.1 A health and safety risk assessment must be prepared prior to the works commencing to ensure that all potential risks are minimised.
- 10.2 All relevant health and safety regulations must be followed.
- 10.3 All site inductions, H&S procedures, H&S constraints and site rules of the client or any on-site contractor will be made known to the attending archaeologists at the start of the works.
- 10.4 Safety helmets, high visibility vests and boots are to be used by all site personnel as necessary. The developer will make all site staff aware of any other PPE⁴ that may be required.

⁴ Personal Protection Equipment

**CARMARTHEN TOWN FOOTBALL GROUND, PITCH
REPLACEMENT:
ARCHAEOLOGICAL WATCHING BRIEF**

RHIF YR ADRODDIAD / REPORT NO. 2017/39
RHIF Y DIGWILLIAD / EVENT RECORD NO. 110468

Gorffennaf 2017
July 2017

Paratowyd yr adroddiad hwn gan
/ This report has been prepared by

ALICE DAY

Swydd / Position: **ARCHAEOLOGIST**



Llofnod / Signature

Date 28 July 2017

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

JAMES MEEK

ar ran Ymddiriedolaeth Archaeolegol Dyfed Cyf.
/ on behalf of Dyfed Archaeological Trust Ltd.

Swydd / Position: **HEAD OF DAT ARCHAEOLOGICAL SERVICES**



Llofnod / Signature

Date 20 September 2017

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

*As part of our desire to provide a quality service we would welcome any
comments you may have on the content or presentation of this report.*

