# SPRING GARDENS, WHITLAND, CARMARTHENSHIRE GEOPHYSICAL SURVEY AND ARCHAEOLOGICAL EVALUATION 2018 SN 20762 16906



Prepared by Dyfed Archaeological Trust For: Hillman Property Trading Partnership





#### **DYFED ARCHAEOLOGICAL TRUST**

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## SPRING GARDENS, WHITLAND, CARMARTHENSHIRE: GEOPHYSICAL SURVEY AND ARCHAEOLOGICAL EVALUATION 2018

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### SPRING GARDENS, WHITLAND, CARMARTHENSHIRE: GEOPHYSICAL SURVEY AND ARCHAEOLOGICAL EVALUATION 2018

#### Summary

DAT Archaeological Services were commissioned by Ian Thomas of Langdale Estates on behalf of Hillman Property Trading Partnership to undertake initial archaeological investigations on the site of the proposed new residential development on land to the north-west of Spring Gardens, Whitland, Carmarthenshire (centred on SN 20762 16906). The development area measures approximately 2.6ha and includes the site of a large rectangular cropmark of archaeological origin (PRN 11782) indicating an enclosure of Iron Age or Romano-British date, with a small extension or annexe to its north. The enclosure was partly evaluated in 2007.

A condition has been placed upon planning permission for the development to undertake a scheme of archaeological works on the enclosure area prior to the development commencing. This will be done as a programme of 'Strip, Map and Record'. In advance of the development an access way needs to be created from Spring Gardens into the site area and it was agreed that an archaeological evaluation of this area should be carried out prior to the access way being built.

It was also agreed that a geophysical survey (approximately 0.72ha in size) would be conducted over the area of the cropmark enclosure to obtain more information regarding its scale, the location of any features or structures within its area and determine if further remains were present beyond the limits of the enclosure ditches. The results of the geophysical survey confirmed the presence of the rectangular enclosure and other possible archaeological anomalies within it. The survey indicated that the ditches of the main enclosure were quite substantial as indicated by the 2007 evaluation, with possible remnants of banks adjacent to them, not identified by the 2007 evaluation. The ditches of the northern extension to the enclosure did not show up on the geophysical survey and were indicated as relatively slight by the 2007 evaluation. Further ditches were noted to the north not previously evaluated. Possible groups of pits were indicated within the main enclosure. No archaeological features were identified outside of the enclosure within the geophysical survey area.

An archaeological evaluation was conducted along the line of the proposed access road leading from Spring Gardens in the southern part of the site area. This revealed an area of modern dumped material at its northern end, but otherwise showed no further archaeological features. Bands of slate/shale were exposed in the undisturbed geological substrata in the base of the trench, which were also indicated by the geophysical survey across the enclosure.

No archaeological features or significant artefacts were revealed during the evaluation of the proposed entrance way into the site area. Although there is still some potential for archaeological remains to lie within this area, this is considered very low. The results could be said to concur with that of the geophysical survey to some extent, with significant archaeological remains within the overall proposed development area being contained within the enclosure.

#### 1 INTRODUCTION

#### 1.1 Project Commission

- 1.1.1 DAT Archaeological Services were commissioned by Ian Thomas of Langdale Estates on behalf of Hillman Property Trading Partnership to undertake geophysical survey and small archaeological evaluation on the site of the proposed new residential development on land to the northwest of Spring Gardens, Whitland, Carmarthenshire (centred on SN 20762 16906) (see Figures 1 and 2). The development area measures approximately 2.6ha.
- 1.1.2 The proposed development comprises the construction of 70 dwellings within the area. Road access to the site will be made from Spring Gardens between the properties of Dol-awel and 1 Rose Cottages. The proposed development layout is shown in Figure 3.
- 1.1.3 Within the northeastern part of the development area lies the site of a cropmark enclosure which was archaeologically evaluated in 2007, confirming the presence of a series of ditches forming a large rectangular enclosure, with a smaller rectangular annexe to the north. The evaluation trenches revealed no evidence for the survival of archaeological features inside of the enclosure ditches, although the 4 trenches excavated concentrated on the ditches and the northern annexe to the enclosure. The trenches did not investigate the internal area of the main enclosure to the south and thus there was considered a high potential that archaeological remains could still survive within this part of the enclosure.
- 1.1.4 Reserved Matters approval was given for the development proposals under reference W/35037. This was pursuant to outline planning permission granted under planning Reference W/17567 which includes condition 13 relating to archaeology placed upon the outline permission due to the cropmark enclosure within the site area. The archaeological condition stated:
  - No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted to and approved in writing by the Local Planning Authority.
- 1.1.5 Following discussions with the archaeological advisor's to the planning authority (Dyfed Archaeological Trust Development Management (DAT-DM)) it was confirmed that the required archaeological works would include a programme of archaeological 'Strip, Map and Record' across the area of the cropmark enclosure with an additional 20m area around the ditches to determine if any archaeological remains extend beyond the cropmark. Additional stripping may be required if archaeological deposits continue beyond the boundary of the cropmark.
- 1.1.6 Due to the development requiring the construction of an access way into the site from Spring Gardens at the outset, it was agreed with the client and DAT-DM that an evaluation trench would be placed in the entranceway to confirm whether any remains were located within this area at the outset of the project. The construction of the access into the site would also enable the archaeological 'Strip, Map and Record' exercise to be undertaken (as heavy plant has been prohibited to access the site from the adjacent Clos Llwyn Ty Gwyn. The works were designed to provide information on the character, date and significance of any below ground archaeological remains that may be present within the proposed access road ahead of further archaeological works.

- 1.1.7 It was also discussed and agreed with the client that a geophysical survey would be undertaken across the cropmark enclosure to determine more information regarding its layout and potential features within it. This was seen as providing a better indication of any underlying archaeology and allow for better targeting of resources during the scheme of 'Strip, Map and Record'. The results of both the trial trench evaluation and geophysical survey are included within this report.
- 1.1.8 Following commission, DAT Archaeological Services prepared a written scheme of investigation (WSI) for archaeological mitigation (including the 'Strip, Map and Record', trial trench evaluation and an updated document including the geophysical survey which was approved prior to the works commencing.

#### 1.2 Scope of the Project

- 1.2.1 As noted above, a WSI for the archaeological evaluation and geophysical survey (as well as the 'Strip, Map and Record') was prepared by DAT Archaeological Services prior to the commencement of works (Document reference FS17-026-WSI\_Spring\_Gardens,\_Whitland\_Exc-v3). This was approved by the archaeological advisors to Carmarthenshire County Council, DAT-DM prior to the start of the works. The following relevant tasks were laid out in the WSI which have been updated to specifically refer to the archaeological works undertaken for this report:
  - To undertake a trial trench evaluation within the area of the first section of access road leading from Spring Gardens;
  - To undertake a geophysical survey across the footprint of the cropmark enclosure within the northern part of the site, including at least a 20m buffer around its perimeter (this is the area where the 'Strip, Map and Record' is proposed;
  - To establish the character, extent and date range (where possible) for any archaeological deposits identified within the access road area that will be affected by the proposed works;
  - To prepare a report and archive on the results of all stages of archaeological works.

#### 1.3 Report Outline

1.3.1 This report provides a summary and discussion of the geophysical survey and archaeological evaluation and their results.

#### 1.4 Abbreviations

1.4.1 Sites recorded on the Regional Historic Environment Record (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Gradiometer readings are measured in NanoTesla (nT).

#### 1.5 Illustrations

1.5.1 Printed map extracts are not necessarily produced to their original scale.

#### 1.6 Timeline

1.6.1 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	
Mesolithic –	c. 10,000 – 4400 BC	Pre
Neolithic –	c.4400 - 2300 BC	hist
Bronze Age –	c.2300 - 700 BC	Prehistoric
Iron Age –	c.700 BC - AD 43	O
Roman (Romano-British) Period –	AD 43 – c. AD 410	
Post-Roman / Early Medieval Period –	c. AD 410 – AD 1086	_
Medieval Period –	1086 - 1536	Historic
Post-Medieval Period <sup>1</sup> –	1536 - 1750	iori
Industrial Period –	1750 - 1899	n
Modern –	20 <sup>th</sup> century onwards	

**Table 1**: Archaeological and Historical Timeline for Wales.

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<sup>&</sup>lt;sup>1</sup> 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

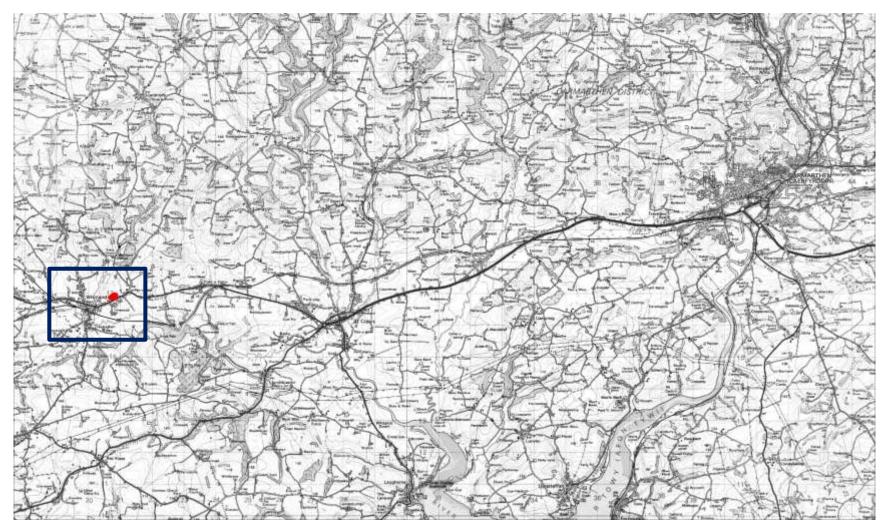


Figure 1: Location plan of Whitland (blue box, with site area shown in red)

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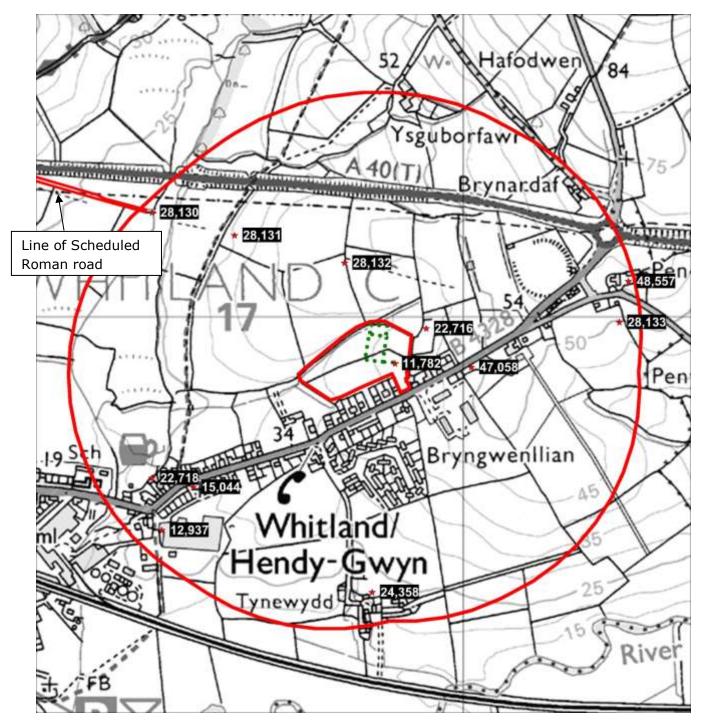


Figure 2: Site area (in red) with location of cropmark enclosure shown (green dotted lines) and known sites recorded on the Dyfed HER within 500m (red stars and numbered with their PRNs)

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Figure 3: Provisional site layout plan (supplied by Langdale Estates)

The area of the access road is highlighted in blue,

The cropmark is shown as a green line and the area for Strip, Map and Record / geophysical survey is within the red boundary

#### 2 THE SITE

#### 2.1 Location

- 2.1.1 The proposed development lies on land to the north-west of Spring Gardens, Whitland Carmarthenshire (centred on SN 20762 16906; Figures 1, 2, and 3).
- 2.1.2 The proposed development comprises the construction of 70 dwellings within the area. Road access to the site will be made from Spring Gardens between the properties of Dol-awel and 1 Rose Cottages. The proposed development layout is shown in Figure 3.

#### 2.2 Archaeological Potential and Historical Background

- 2.2.1 The Dyfed Historic Environment Record (HER) was searched for known archaeological sites within 500m of the Spring Gardens development site (Table 2, sites recorded by their Primary Record Number (PRN); Figure 2). The sites recorded include the enclosure PRN 11782 which lies within the northern part of the site area. This was partially evaluated in 2007 confirming the presence of the ditches and a possible smaller enclosure on its northern side. No dating evidence was recovered from the ditches, but due to its shape it is thought most likely to date from the Iron Age or even the Roman period.
- 2.2.2 Four identified segments of the Roman road running west from Carmarthen to Wiston in Pembrokeshire are located within the 500m search area, including a stretch running at Ysgubor Fawr (PRN 28130) around 490m to the northwest, which is designated as a Scheduled Ancient Monument (CM279), through the beeches (PRN 28131) to the northwest, through the rugby ground to the north (PRN 28132) and a further stretch at Dolecoed to the east-northeast (PRN 28133). The Roman road passes close to the north of the site area lies leading from Carmarthen, through Whitland and on towards Wiston in Pembrokeshire. Part of the road line is still clearly visible as a substantial agger (raised road line) in the fields to the northwest of the proposed development plot (south side of the A40) and it is this part that is designated as a scheduled monument (CM279).
- 2.2.3 It is considered very likely that a Roman fort is present at Whitland (lying equidistant between the fort at Carmarthen and that recently discovered in Wiston, Pembrokeshire). From the shape of the enclosure and its proximity to known Roman remains it is likely that it dates from the Romano-British period.
- 2.2.4 Other sites recorded on the HER in the search area are of post-medieval date, including a brickworks to the east (PRN 22716), a small former settlement predating the expansion of Whitland along Spring Gardens lying to the east (PRN 47058) and the farmstead at Pen Y Coed to the east-northeast (PRN 48557).
- 2.2.5 The cropmark enclosure was subject to an archaeological evaluation in 2007 by Cambria Archaeology (an earlier name for DAT Archaeological Services). The results of this evaluation (PRN 62771) were summarised as follows:

Four trial trenches were machine excavated all of which contained archaeological features and deposits confirming the presence of a defended rectangular enclosure with an adjoining annexe.

Sections of the defensive ditches for the enclosure were encountered and test excavated. Test excavation within the interior of the enclosure and annexe suggests that little or no stratified occupation deposits have survived the subsequent centuries of agricultural activity on the site. It is likely that only features cut into the subsoil or bedrock, such as the defensive ditches, will have survived below ground.

Apart from the defensive ditches, modern field drains, and probable animal or root activity, no other archaeological features or deposits were revealed during the evaluation excavations. In addition, no artefacts or other dating evidence were encountered.

2.2.5 The locations of the four trenches are shown on Figure 4. It should be noted that although the evaluation summary implies that the interior of the enclosure was evaluated, only a very small proportion of the internal area was actually investigated. Although it is likely that any features within the interior would have been disturbed by agricultural activity (ploughing etc) the extent of this disturbance has not actually been confirmed.

PRN	Site name	Description	Period	Grid reference
11782	Spring Gardens Cropmark enclosure	A rectangular defended enclosure identified from aerial photographs, located on a very gentle north facing hillslope at 40m above sea level. The enclosure measures approximately 55m N-S by 35m E-W. A smaller, squarer annex enclosure is attached to the no	Roman, Iron Age?	SN 2085 1690
12937	Hen Ty Gwyn – Fulling Mill	A 16th century fulling mill mentioned in historic documents as being in or near the town of Whitland, Carmarthenshire.	Medieval	SN 20341 16536
15044	Tabernacle		Post-medieval	SN 2041 1663
22716	Brickyard		Post-medieval	SN 20918 16977
22718	Whitland – Corn Mill	Corn mill recorded on the historic Ordnance Survey maps but no longer shown on modern mapping. Recent aerial photographs (Ordnance Survey Next Perspectives, 2009) indicate that the site has been destroyed, with a possible caravan park developed on the site.	Post-medieval	SN 2032 1665
24358	Ty Newydd – Mansion	C16th home of John Vaughan then of the Adams's later of Peterwell Ceredigion. In farmyard when demolished c. 1965.	Post-medieval	SN 2080 1640
28130	Ysgubor-Fawr – Roman Road	A segment of the Roman road west of Carmarthen (PRN 14277). Part of a parchmark plotted from aerial photographs between SN19911732 and SN20531718	Roman	SN 2032 1723
28131	Beeches – Roman Road	A segment of the Roman road west of Carmarthen (PRN 14277). Part of a cropmark plotted from aerial photographs between SN19911732 and SN20531718.	Roman	SN 2050 1718
28132	Whitland Rugby Pitch – Roman road	A segment of the Roman road west of Carmarthen (PRN 14277). Identified as a parchmark and plotted from aerial photographs between SN20741712 and SN20951707.	Roman	SN 2074 1712
28133	Dolecoed – Roman road	A segment of the Roman road west of Carmarthen (PRN 14277). Plotted from aerial photographs between SN21361697 and SN21471695. The line of the Roman road lies	Roman	SN 2134 1699

**Table 2:** Known archaeological and historic sites recorded within 500m of the Spring Gardens development area, Whitland recorded on the Dyfed Historic Environment Record.

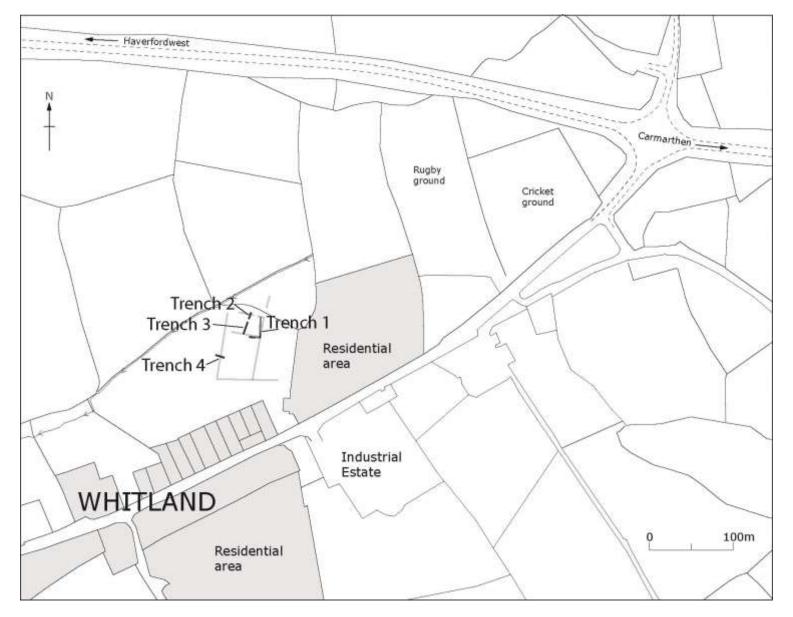
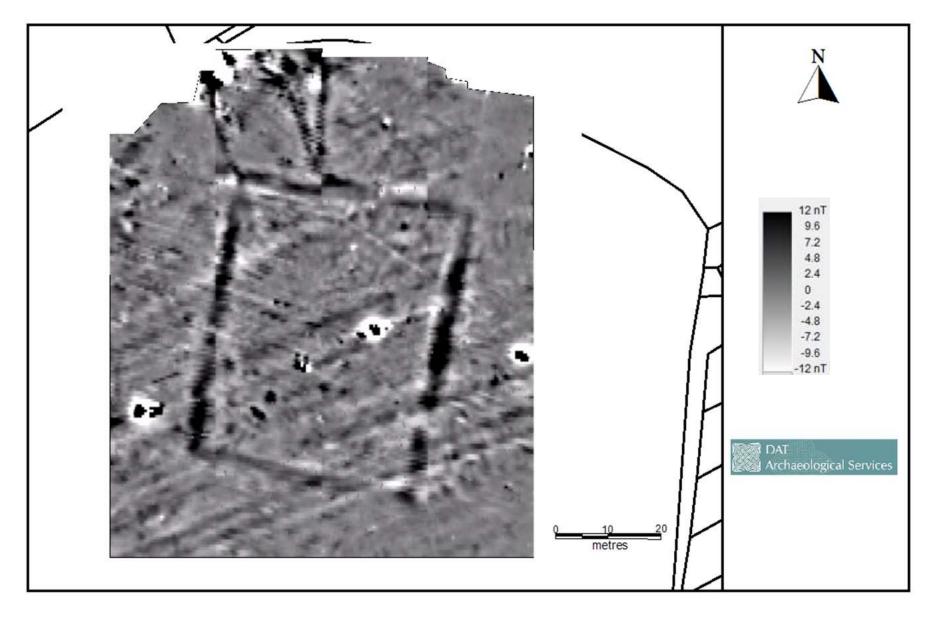


Figure 4: Trench locations for 2007 excavation (PRN 62771)

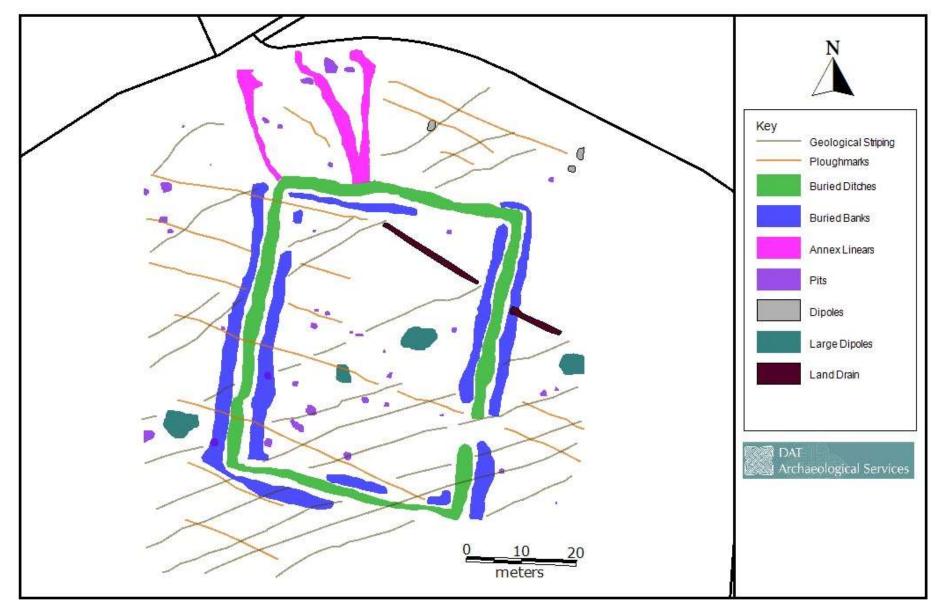
#### 3. GEOPHYSICAL SURVEY (ERN 112132)

#### 3.1 Geophysical Survey Methodology

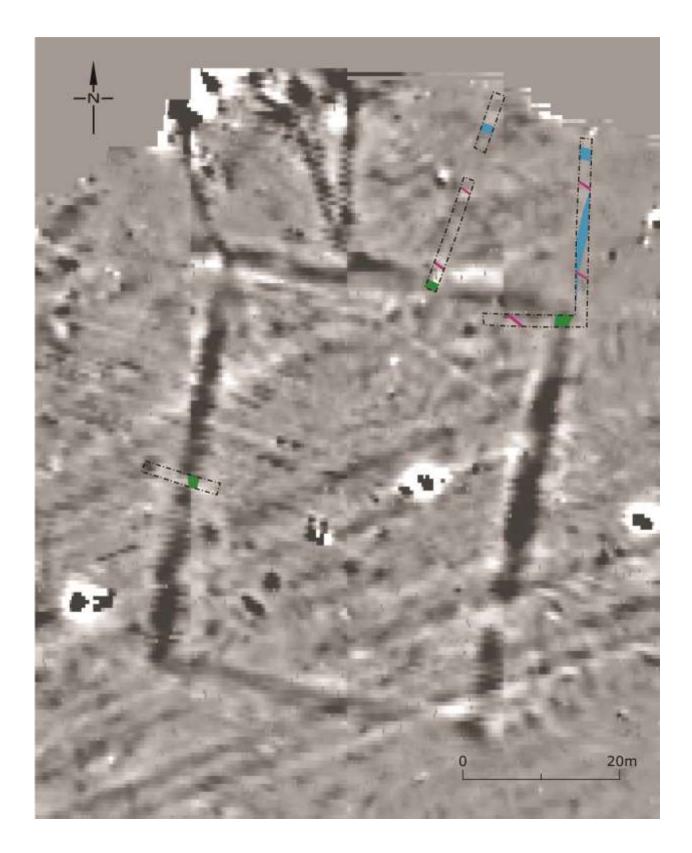
- 3.1.1 The geophysical survey was undertaken across the area of the enclosure (see Figure 4; ERN 11782). A fluxgate gradiometer was used for the survey, which detects variations in the earth's magnetic field. Readings were taken on traverses of 0.5m within predetermined 20m x 20m grids set out by a Differential Global Positioning System (DGPS).
- 3.1.2 Processing was performed using *TerraSurveyor 3.0*. The data is presented with a minimum of processing. The presence of high values caused by ferrous objects, which tend to hide fine details and obscure archaeological features, are 'clipped' to remove the extreme values allowing the finer details to show through.
- 3.13 The processed data is presented as grey-scale plots overlaid on local topographical features. The main magnetic anomalies are identified and plotted onto the local topographical features as a level of interpretation.
- 3.14 The resulting survey results and interpretation diagrams should not be seen as a definitive model of what lies beneath the ground surface, not all buried features will provide a magnetic response that can be identified by the gradiometer. In interpreting those features that are recorded the shape is the principal diagnostic tool, along with comparison with known features from other surveys. The intensity of the magnetic response could provide further information, a strong response for example indicates burning, high ferric content or thermoremnancy in geology. The context may provide further clues but the interpretation of many of these features is still largely subjective.
- 3.15 All measurements given are approximate as accurate measurements are difficult to determine from fluxgate gradiometer surveys. The width and length of identified features can be affected by its relative depth and magnetic strength.
- 3.16 The interpretation diagrams are used to identify the presence/absence of any potential archaeological deposits.



**Figure 5:** Greyscale plot of geophysical survey results.



**Figure 6:** Interpretation of geophysical survey results.



**Figure 7:** Showing Trench locations for 2007 excavations (PRN 62771) overlain on geophysical survey. Trench outlines are shown as a dotted line, features coloured green represent the enclosure ditch, features coloured blue represent the enclosure extension, and features coloured pink represent more modern features.

#### 3.2 Geophysical Survey Results

- 3.2.1 The area was surveyed on the 4<sup>th</sup> of April, 2017. The greyscale plot can be seen in Figure 5 and the interpretation of the identified geophysical anomalies is shown in Figure 6 and discussed below.
- 3.2.2 The geophysical survey shows a complex range of archaeological features and therefore any interpretation regarding context and phasing is purely speculative.
- 3.2.3 There are a number of linear features which run north-east to south-west across the site which are interpreted as being geological (coloured dark brown in Figure 6). Geological striping was also confirmed in the evaluation trench (see below).
- 3.2.4 In addition to the geological striping running north-east to south-west there are also intermittent stripes running north-west by south-east (coloured light brown in Figure 6) which are consistent with plough marks.
- 3.2.5 There were a number of isolated dipole anomalies (shaded grey in Figure 6) which can be seen across the survey area. Such anomalies consist of a single positive response with an associated negative response forming a 'halo effect'. The negative and positive response is of equal magnitude but opposite polarity and are caused by the same feature. Dipole anomalies are very commonly observed across a range of sites, particularly agricultural land. Generally, unless the dipoles form part of a larger pattern or feature they are regarded as not significant. They are usually the result of modern ferrous rich debris such as brick and tile fragments as well as objects such as horse shoes or broken plough shares, which lie just below or on the surface.
- 3.2.6 In addition to the ordinary dipoles there were a number of much larger Dipole readings (shaded light green in Figure 6). These are interpreted as being possible burnt areas, probably in the topsoil associated with burning of vegetation (bonfires or similar).
- 3.2.7 The first phase of archaeological activity clearly identified would appear to be the sub-rectangular enclosure which the survey is centred upon. It is not visible on the existing ground surface, although can be seen on both aerial photographs and on Lidar data. This enclosure is roughly aligned roughly north-north-east by south-south-west and appears to have entrance on its eastern flank. The enclosure measure approximately 43m (N-S) by 56m (E-W).
- 3.2.8 This enclosure is made up of linear anomalies (shaded light green in Figure 5) which exhibit a positive magnetic response and are interpreted as being buried ditches. These are surrounded by less significant negative magnetic anomalies (shaded blue in Figure 6) interpreted as being the remnants of buried banks.
- 3.2.9 The enclosure ditch was confirmed by the 2007 evaluation of the site (PRN 62771) where it was visible as a substantial feature dug into the underlying natural soils in Trenches 1, 3 and 4 (Figure 7; Photos 1 & 2). The evaluation did not identify any visible traces of the banks detected in the geophysical survey.



**Photo 1:** Part of the northern side of the main enclosure ditch revealed in the southern end of Trench 3 of the 2007 evaluation (PRN 62771) (Figure 7)

Looking east



**Photo 2:** Excavated section through the western side of the main enclosure ditch revealed in Trench 4 of the 2007 evaluation (PRN 62771) (Figure 7). Looking north-west.

- 3.2.10 Along the northern edge of the enclosure there are a number of linear positive magnetic anomalies which are interpreted as ditches (coloured pink in Figure 6). It is likely that these are additions to the enclosure as they appear to adjoin the initial circuit enclosing further area to the north. This area is difficult to interpret as the true extent of the ditches are not visible in this survey and are obscured by the river which runs along the northern edge of the field.
- 3.2.11 One positive magnetic anomaly ran through the geophysical survey area (shaded dark red in Figure 6) was confirmed by the 2007 evaluation to be a land drain (Photo 3).



**Photo 3:** Land drain revealed in Trenches 1 and 3 of the 2007 evaluation (Figure 7) and as also seen on the geophysical survey (coloured dark blue on Figure 6).

- 3.2.12 Several other ditches in the north-east corner of the survey which were identified in the 2007 evaluation in Trenches 1, 2 and 3 were not detected in the geophysical survey. These anomalies made up the northern and eastern section of the extension (or annexe) identified on aerial photography (Photo 4). The absence of these ditches in the geophysical survey is possibly due to disturbance from the stream which runs to the north of the field or because change in magnetism along the excavated ditch. The ditches of the extension were also far slighter than those of the main enclosure.
- 3.2.13 There are also other linear anomalies which are positive magnetic responses which are interpreted as ditches (coloured red in Figure 6). It is not clear whether these are later additions to the enclosures or are in fact completely separate.
- 3.2.14 Both inside and outside of the enclosure there are a number of positive anomalies which are interpreted as being pit like features (coloured purple in Figure 6). Although these features are distributed across the site there are three substantial pit-like features located in the south-western corner

of the enclosure which appear to be in a group. These indicate potential contemporary archaeological features located within the rectangular enclosure.



Photo 4: Aerial photograph of cropmark PRN 11782, looking south.

#### 4 TRIAL TRENCH EVALUATION (ERN 112133)

#### 4.1 Trial Trench Methodology

- 4.1.1 An archaeological evaluation of the first section of access road leading from Spring Gardens was undertaken in advance of development. The trench methodology followed the details as outlined in the written scheme of investigation.
- 4.1.2 The aim of the trench was to ascertain the presence/absence, date, character, significance, extent and state of preservation of any potential archaeological remains within this part of the development site. This involved the machine excavation of a trench (using a toothless bucket) under archaeological supervision within the line of the access road measuring approximately 20m in length and 1.6m in width.
- 4.1.3 The trench was fully cleaned using trowels and the identified archaeology recorded and sample excavated. The location of the trench is listed in Table 3 and illustrated in Figure 8.
- 4.1.4 All deposits were recorded by archaeological context record sheet, scale drawing, photography and site notebooks using the DAT Archaeological Services' Recording Manual<sup>2</sup>.

Trench	From		То	
Number	Easting	Northing	Easting	Northing
1 (2018)	220862.52	216865.79	220870.19	216847.29

**Table 3:** Trench location in relation to Ordnance Survey national grid coordinates

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<sup>&</sup>lt;sup>2</sup> DAT Archaeological Services use the Recording Manual developed by English Heritage Centre for Archaeology. A copy will be available for inspection if required.

#### 4.2 Trial Trench Results

- 4.2.1 The evaluation was carried out in relatively dry weather with patchy sunshine on the 6<sup>th</sup> of April 2018.
- 4.2.2 The trench measured 20m x 1m and was aligned roughly north-south along the access road for the proposed development (Figure 8).
- 4.2.4 There were 5 deposits recorded in the trench (see Table 4, Photo 7).
- 4.2.5 The geological sub-strata (105) consisted of slate/shale bedrock in linear veins across the trench. It appears that these veins are consistent with the geology seen in the geophysical survey (Figures 5 and 6). The subsoil (104) lay directly on this and comprised a grey silty clay with frequent angular stones.
- 4.2.6 At the southern end of the trench there was a band of topsoil (103) which was buried by a modern dumping layer (102) made up of grey silt and occasional frogged bricks (Photo 7). The trench was covered a band of topsoil and turf which merges with 103 at the point at which the demolition layer (102) ceases.
- 4.2.7 There were no archaeological features detected within the evaluation trench. No significant artefacts were recovered during this evaluation, although occasional fragments of modern ceramics and other detritus were noted in the topsoil (but not retained).



**Photo 5:** Overview of Trench 1 looking south following cleaning.



**Photo 6:** Overview of Trench 1 looking north following cleaning.



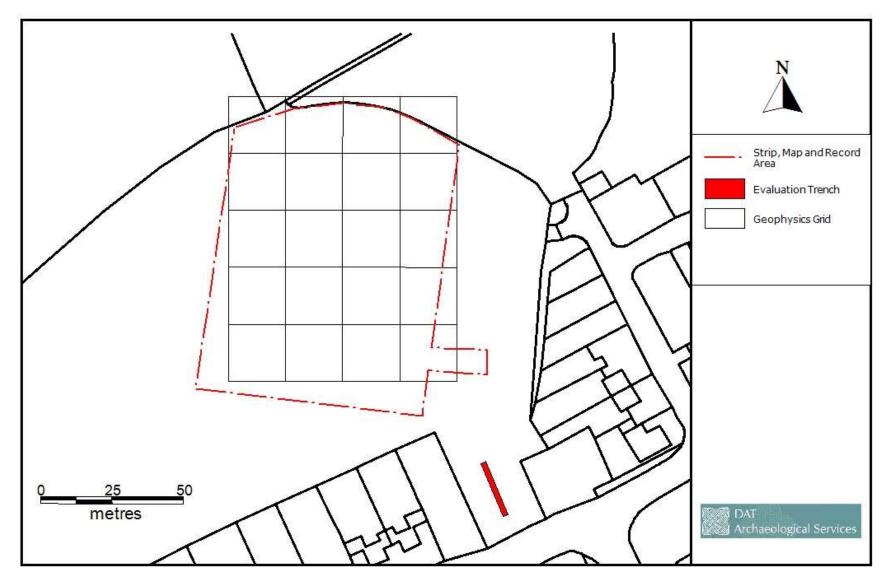
**Photo 7:** Photograph of sample section Trench 1. Note the buried topsoil (103) beneath demolition layer (102).



**Photo 8:** Overview of Trench 1 looking northwest with the area of the enclosure in the background.

Context Number	Description
101	Topsoil- black humic with some glazed pottery
102	Demolition Layer- Grey grit, with occasional frogged bricks c.1850 at south end of trench.
103	Buried Topsoil- Towards the south of trench-(merges with (101) to north where (102) ceases.
104	Subsoil- grey clay, with frequent angular stones
105	Bedrock-slate in linear veins.

**Table 4:** List of contexts within Trench 1



**Figure 8:** Location plan showing development area, trial trench location and geophysical survey grid, including the outline of the proposed 'Strip, Map and Record' area

#### **5** CONCLUSIONS

- 5.1 The geophysical survey has addressed the aims as laid out in the WSI by confirming the presence of potential archaeological features and deposits within the proposed development area, including the large rectangular enclosure first identified as a cropmark.
- 5.2 The geophysical survey confirmed the presence of other possible archaeological anomalies within the enclosure, including pits which may be contemporary with the enclosure.
- 5.3 The rectangular anomaly identified on the survey is consistent with the initial interpretation of the 2007 evaluation of being an Iron Age or Roman enclosure. Although the enclosure does not have the rounded corners more typical of Romano-British enclosures, the likelihood of it being of this date is perhaps more likely due to its proximity to the Roman road.
- 5.4 Despite the geophysical survey there is potential for further archaeological deposits to be present on site which could not be detected for a number of reasons (i.e. depth of deposits, strength of magnetic variation from natural surroundings).
- 5.5 The geophysical survey did identify geological banding (presumably slate/shale bedrock) crossing the site as identified within the evaluation trench placed along the proposed access way into the development area.
- 5.6 It was clear from the results of the geophysical survey and the 2007 evaluation that the main enclosure comprises quite substantial ditches which may have originally had banks associated with them. The northern extension or annexe to the enclosure did not appear on the geophysical survey, perhaps due to the proximity to the river along the northern edge of the site or the fact the features were relatively shallow and insignificant as recorded during the 2007 evaluation.
- 5.7 The geophysical survey clearly indicates that the enclosure has high archaeological potential, with few, if any features lying directly outside the perimeter of the enclosure ditch.
- 5.8 The evaluation trench was located as close to the proposed entrance way into the development area as was possible (without removing bunds of material and field boundary). The trench was of 20m length.
- 5.9 Agriculturally derived soils included extant dark topsoil and an underlying subsoil layer which had been churned up through plough disturbance. This subsoil overlay the underlying natural soils and bands of bedrock.
- 5.10 An area of modern dumped material was present in part of the trench, overlain with more recent topsoil.
- 5.11 No archaeological features or significant artefacts were revealed during the evaluation of the proposed entrance way into the site area. Although there is still some potential for archaeological remains to lie within the entranceway area, this is considered very low. The results could be said to concur with that of the geophysical survey to some extent, with significant archaeological remains within the overall proposed development area being contained within the enclosure.

#### 6. SOURCES

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## SPRING GARDENS, WHITLAND, CARMARTHENSHIRE: GEOPHYSICAL SURVEY AND ARCHAEOLOGICAL EVALUATION 2018

RHIF YR ADRODDIAD / REPORT NUMBER: 2018-22 RHIF Y PROSIECT / EVENT RECORD NOS: 112132 / 112133

#### Ebrill 2018 April 2018

Paratowyd yr adroddiad hwn gan / This report has been prepared by **Luke Jenkins**Swydd / Position: **Archaeologist DAT Archaeological Services** 

Llofnod / Signature ...... Dyddiad / Date 24/04/18

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

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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

