Archaeology Wales

Llechwenni Farm, Nantgaredig, Carmarthenshire

Archaeological Evaluation



By Philip Poucher

Report No. 1475

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Llechwenni Farm, Nantgaredig, Carmarthenshire

Archaeological Evaluation

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Non-Technical Summary

In April 2016 Archaeology Wales Ltd (AW) carried out a trenched evaluation across a section of the probable line of the Tywi Valley Roman road to the west of Nantgaredig, Carmarthenshire. The archaeological investigation was requested by Dyfed Archaeological Trust Planning Services as a condition (Condition 6) of the planning permission for a new access track at Llechwenni Farm (Planning Application E/32254). The archaeological evaluation was commissioned by Dr Anthony Davies and the Lewis Partnership.

The Roman road (PRN 33946; NPRN 401741) connected the Roman forts of Carmarthen (Moridunum) to the west and Llandeilo to the east. Both forts are likely to have been established soon after the Roman invasion of the area in the 70s AD, with civilian settlement continuing, in Carmarthen at least, until the 3rdor 4th century. Sections of the Roman road have been positively identified through aerial photography and groundwork along the Tywi valley. This section of the road has been identified on aerial photography, apparent on the ground as a linear depression.

The evaluation comprised the archaeological investigation of a single machine-excavated trench across the projected road along the planned access track. A compacted stone surface, comprising two individual compacted layers (006) (007), was revealed at a depth of circa 0.50m to 0.75m below current ground levels. This is likely to represent the road surface, 5.3m wide, which appears to have been partly sunk or worn down to its current level. It was flanked on either side by drainage ditches [008] (009) [010] (011), each circa 0.7m wide and 0.2m to 0.4m deep. No dateable material was recovered from the road deposits or the ditch fills, although several fragments of possible boot hobnails were recovered from overlying deposits (002) (005). The form and alignment of the road appear good indicators that this does indeed represent the remains of the Tywi Valley Roman road.

Pottery recovered from overlying deposits suggests the road is likely to have become unusable by the early post-medieval period. No further features of archaeological interest were recorded on either side of the road or within overlying deposits.

It is recommended that remains of the road are preserved in situ. As the archaeological features lie within a linear depression, it is anticipated that the planned trackway will need to be raised above this area to a level consistent with the general ground levels to the north and south. The level of impact (for both flanking ditches) is circa 16.80m OD, which is 0.40m below ground level. Should groundworks be required across the line of the road, then these should be kept to a minimum, and not exceed 0.30m below current ground levels to avoid disturbing archaeological remains.

1 Introduction

- 1.1 This report has been prepared by Archaeology Wales Ltd (AW) in response to a request by the Lewis Partnership and Dr. Anthony Davies to provide an archaeological evaluation of the potential impacts of a proposed trackway construction on land near Llechwenni Farm, Nantgaredig, Carmarthenshire.
- 1.2 The site currently comprises agricultural land, laid to pasture and bounded by hedgerows. It is located to the west of the village of Nantgaredig in central Carmarthenshire; NGR SN 49189 21548, Figures 1 & 2. Planning permission has been granted to establish a new access road for Llechwenni Farm to the northwest, running via an existing Doctors Surgery to the east, and alongside the field boundaries towards the farm. The planning application number is E/32254 and the planning authority is Carmarthenshire County Council (CCC).
- 1.3 The planning services division of Dyfed Archaeological Trust (DAT-PS), in its capacity as archaeological advisors to the local planning authority, have requested that an archaeological evaluation is undertaken prior to the commencement of groundworks as the route of the proposed track crosses the line of possible Roman Road, identified from aerial photography. The requirements for an archaeological investigation has been set as one of the conditions of the planning permission; it states (Condition 6):

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 by the applicant and approved in writing by the local planning authority.

Reason: To protect historic environment interests whilst enabling development.

- 1.4 In order to investigate the archaeological potential of the site prior to construction works commencing the developer, Dr Anthony Davies, commissioned Archaeology Wales Ltd to undertake the archaeological evaluation. A Written Scheme of Investigation (WSI) for the archaeological evaluation was produced by Archaeology Wales and approved by DAT-PS (see Appendix III). The subsequent evaluation fieldwork used a strategically placed trial trench to locate and describe archaeological features present within the proposed development area. The work was designed to elucidate the presence or absence of archaeological material, its character, distribution, extent, condition and relative significance.
- 1.5 The excavations took place between the 19th and 24nd May 2016. The project was managed by Phil Poucher and the fieldwork carried out under the supervision of Andrew Shobbrook. A site monitoring visit was undertaken by DAT-PS on the 20th May.
- 1.6 All work conformed to the CIfA's Standards and Guidance for Archaeological Field Evaluation (2014) and was undertaken by suitably qualified staff to the highest professional standards.
- 1.7 The AW project number for the work is 2434 and the site code is LFN/16/EV. The project details are summarised on the Archive Cover Sheet (Appendix IV).

2 Site Description

- 2.1 The site lies to the west of the village of Nantgaredig in central Carmarthenshire, centred on SN 49189 21548 (Figures 1 & 2). It comprises a field of pasture, bounded by hedgerows. This lies on the northern edge of the relatively flat valley base of the Tywi Valley. The village itself is largely comprises ribbon development along the B4310 and at the crossroads with the A40. Llechwenni Farm lies near the A40 and is currently accessed off that road. This access will be blocked off, and a new access route will be cut from the B4310 via and existing Doctors Surgery to the southeast of the farm.
- 2.2 Carmarthen lies around 4m (6.4km) along the A40 to the west, Llandeilo lies around 9 miles (14.4km) along the A40 to the east.
- 2.3 The line of the Roman Road, depicted on aerial photographs, consists of a linear depression within the field, running in a west-northwest to east-south-east direction (Figure 3).
- 2.4 The bedrock geology of the area comprises largely mudstones of the Felin Wen Formation, along with bands of Felsic Tuff and limestone of the Asaphus Ash Formation. This is overlain by sand and gravel alluvium and river terrace deposits (BGS, 2016).

3 Historical Background

- 3.1 Prehistoric activity is recorded in the area. A Neolithic or Bronze Age henge monument lies on the eastern edge of Nantgaredig (PRN 1754), some 300m to the southeast of the start of the access track. Further Bronze Age standing stones are also reported within the surrounding landscape, and a possible round barrow burial mound is recorded 150m to the northeast of the access track.
- 3.2 The main feature of archaeological interest in the area is the Roman Road (PRN 33946; NPRN 400971) that connected Carmarthen to the west and Llandeilo to the east. The Roman fort in Carmarthen (Moridunum) is believed to date from around 75 AD. Although the fort was subsequently reduced in size, a settlement grew up outside the fort and Moridunum became a walled town by the 3rd century AD. A fort was similarly established in Llandeilo in the later 1st century AD, probably soon after the Roman invasion of the area in the 70s AD. A second smaller fort at Llandeilo was subsequently superimposed over the original fort, although this was then abandoned in the early 2nd century AD. There are some indications however that civilian settlement may have continued on the site (Hughes, 2007). Remnants of the road that connected these two locations have been positively identified through aerial surveys and fieldwork. Sections between Llandovery and Carmarthen were identified in the early 1980s (James & James, 1984), including stretches between Broadoak and Llanegwad to the east of Nantgaredig, with many further sections coming to light since that time. The line of the road crossing through this area is preserved as field boundaries to the west, and as the trackway to Doleiddan to the east, and can clearly be seen on aerial photographs between the two (Figure 3), but this particular stretch has not previously been archaeologically investigated (Photos 1 & 2).
- 3.3 The current road between Carmarthen and Llandeilo, the A40, lies some 260m to the north of the line of the Roman road. The current road appears on mapping from the mid-19th century onwards, by which point there is no indication of the survival of the route of the Roman road

other than the alignment of a farm track to the east and the configuration of field enclosures to the west.

3.4 By the later post-medieval period Nantgaredig was a small village centred on the crossroad to the north of the scheme area. A series of farms are located along the B4310 to the south of the crossroads, including Barriwns a short distance to the east of the site; the access track to this farm possibly follows the line of the former Roman road. Nantgaredig village gradually expanded along the roadside in the mid to late 20th century. A modern doctor's surgery was built to the east of the site, utilising the former trackway to Barriwns, and the projected route of the Roman Road, as the access road to the surgery.

4 Methodology

- 4.1 Prior to the evaluation fieldwork, a Written Scheme of Investigation was produced detailing the methodology for the archaeological evaluation. This was agreed by DAT-PS and a copy is included in Appendix III.
- 4.2 A single evaluation trench was machine-excavated across the line of the Roman road where this crosses the planned route of the new access track (Figures 3 & 4). The route of the Roman road is clearly visible within the field as a linear depression, although the trench was of a sufficient length to investigate areas to either side of this depression (Photos 1-3).
- 4.3 The Trench measured 20m long, by 1.8m wide, and was orientated north-northeast to southsouthwest. The trench was positioned to uncover a perpendicular cross-section of the Roman road along the line of the proposed groundworks for the access track (close to the hedge-line).
- 4.4 The trench was machine-excavated using a flat-bladed bucket under close archaeological supervision. The trench was excavated to either the top of archaeological features or to natural geological deposits.
- 4.5 All areas were hand-cleaned to prove the presence or absence of archaeological features and to determine their significance. Sample excavation was undertaken on all cut archaeological features (although the surface of the Roman road was left *in situ* following excavation and cleaning by hand). Recording was carried out using Archaeology Wales recording systems (proforma context sheets, etc), using a continuous number sequence for all contexts.
- 4.6 Context numbers 001 to 012 were allotted during the fieldwork. These contexts are summarised in Appendix I.
- 4.7 Written, drawn and photographic records of an appropriate level of detail were maintained throughout the course of the project. Digital photographs were taken using cameras with a resolution of 10 mega pixels or above.
- 4.8 Plans and sections were drawn to a scale of 1:50, 1:20 and 1:10, as required.
- 4.9 The fieldwork took place between 19th and the 24nd May 2016.
- 4.10 A project archive will be prepared in accordance with the National Monuments Record (Wales) agreed structure, as laid out in the project design (Appendix III).

5 Results of the Evaluation

5.1 Evaluation Trench (Figures 5-7; Photos 3-14)

- 5.1.1 Natural deposits were recorded at depths of between 0.45m and 0.59m below current ground levels. The natural consisted of a layer of silty-clay and gravels (003), revealed at a depth of between 0.60m and 0.70m below ground level (16.62mOD to 16.77mOD). This may represent high-energy fluvial activity on the floodplain, or potential geological deposition. This deposit was not reached towards the northern end of the trench although ground levels suggest the natural ground was rising slightly. Excavation ceased in the northern part of the trench at an overlying natural deposit of mid to light orange-brown silty-clay (004). This was recorded at a depth of *circa* 0.60m below ground level (between 16.55mOD and 16.78mOD). This deposit appeared to represent a fluvial floodplain deposit.
- 5.1.2 At the northern and southern end of the trench the natural gravel deposit (003) was overlaid by a layer of mid-grey silty-clay (012), recorded at a depth of 0.35m to 0.50m below ground level, between 16.88mOD and 16.62mOD. This layer would also appear to represent natural fluvial floodplain deposits and appeared to extend northwards to partially overlay deposit 004. Archaeological features were cut into this deposit, and it may therefore represent the ground level contemporary to the archaeological features (Roman road and flanking ditches).
- 5.1.3 Crossing centrally through the linear depression targeted by the evaluation trench were compacted stone deposits, 5.3m wide, flanked by ditches on either side. Excavation ceased at this level. The earliest revealed road deposit (007) consisted of a mix of medium to large stone, compacted within a dark-grey silty-clay gravel. An upper deposit (006) was noted at a slightly higher level along both the southern and northern edge of the road surface, consisting of a concentration of larger stones and less gravel, compacted within a light to mid brown silty-clay. It would seem likely that deposit 006 represented a road surface of larger compacted stone that had become worn away through use of the road, to reveal either an earlier surface or a lower, more gravelly construction deposit along the centre of the road surface. The upper surface (006) was at its highest along the southern edge of the road, at a depth of 16.64mOD, *circa* 0.45m below current ground level. The surface was more typically revealed at depths of between 16.35mOD and 16.46mOD.
- 5.1.4 The compacted stone deposits (006) (007) that formed the road surface were flanked by relatively shallow ditches [008] [010] that appeared to have partly cut into, or constructed as part of, the revealed road deposits.
- 5.1.5 Ditch 010 extended along the northern edge of the road, across the entire width of the evaluation trench. This feature was 0.75m wide and between 0.2m and 0.4m deep. This ditch had relatively shallow straight to concave sides and a concave base, and was cut through natural deposits 012 and truncated deposit 003. The road surface layer 006 formed the southern side of the ditch but it was not clear if the ditch had been cut into the road surface, or if the road deposit had been laid with a raised edge to form one side of the ditch. The base of the ditch was at 16.30mOD. The northern edge of the ditch, as it appeared in section, indicates this had been cut from at least 16.80mOD (*circa* 0.40m below current ground levels). The ditch was filled by a single deposit (011) of mid-brown silty-clay with the occasional charcoal fleck and two small unidentifiable iron objects, but no dateable material.

- 5.1.6 The ditch along the southern edge of the road surface (ditch 008) was of a similar profile, 0.7m wide and between 0.27m and 0.2m deep. The southern edge of the ditch [008] was cut through natural deposit 012 and 003. The road surface layer 006 formed the northern edge of the ditch. The base of ditch 008 was at a higher level than ditch 010, at 16.57mOD, but with the upper part of the cut recorded at a similar level to ditch 010, at 16.78mOD (0.45m below current ground levels). This ditch also contained a single fill (009), consisting of mid-brown silty-clay, containing no finds.
- 5.1.7 The road surface (006) (007) was overlaid by a layer of mid-brown silty-clay up to 0.18m thick (005). This deposit appeared quite mixed, and contained a small number of finds including small iron nails that may represent hobnail fragments from shoes. Three larger iron nail fragments were also recovered, as were several fragments of light-brown glazed pottery, dated to the 16th to 17th centuries. This measured up to 6.6m wide, extending across the depression within which the remains of the road surface lay, and also continued to the north, beyond stone surfaces 006 and 007, to seal ditch 010.
- 5.1.8 Deposit 005 was overlaid by a mid-brown silty-clay (002) that was 0.2m to 0.3m thick. A few fragments of 15th to 17th century pottery were retrieved from layer 002 along with a later 18th or 19th century clay pipe stem. This deposit appeared to represent a post-medieval alluvial / agricultural deposit.
- 5.1.9 The topsoil (001) comprised a dark-brown silty-clay, typically around 0.25m thick.

5.2 Artefactual and Environmental Data

- 5.2.1 A total of 25 items were recovered from the evaluation trench, comprising ten fragments of pottery, fourteen small iron objects, and a clay pipe stem. These are listed in the finds summary table (Appendix II).
- 5.2.2 The pottery fragments were recovered from the silty-clay layers above the road surface, and therefore are likely to correspond to a period when the road is unlikely to have been in regular use and was clearly not being maintained. The lowest deposit (005) contained six fragments of 16th to 17th century pottery, which would suggest the road had fallen out of use by the early post-medieval period and was becoming covered in soil and/or alluvial deposits. An overlying alluvial/agricultural layer (002) was deposited after the road had become covered by deposit 005 and was clearly no longer in use. This deposit also contained four fragments of pottery that can be dated to the 15th to 17th century, although a later date is perhaps seems more likely given the presence of a single fragment of clay pipe stem, dated to the 18th or 19th century.
- 5.2.3 A number of small iron objects were retrieved from three different deposits. These significantly include context 011, the fill of the northern drainage ditch [010] associated with the Roman road. The fill appeared to represent a silting-up of this drainage ditch, suggesting the road was no longer being maintained. The iron objects, or fragments of objects, are unfortunately too heavily corroded to positively identify. Deposit 005, which represents a period when the road was no longer in use, in the 18th or 19th century, contained the majority of the total number of retrieved iron objects. These may have originated from the underlying road surface. Three corroded nail fragments were recovered from layer 005 in addition to

eight smaller rounded nail fragments (although six were heavily corroded) were recovered. These smaller nails would appear to represent hobnails from footwear. In their current state they cannot be closely dated, and could originate from the Roman, medieval or early post-medieval periods. The overlying post-medieval deposit 002 also contained a heavily corroded iron object.

5.2.4 No environmental samples were taken during the evaluation.

6 Discussion and Conclusions

6.1 Overall Interpretation

- 6.1.1 The two compacted stone surfaces (006) and (007) identified in the evaluation trench appeared to represent the remains of a road surface, 5.3m wide, flanked by drainage ditches along either side [008] [010]. Unfortunately no dateable material was recovered from the stone layers (006) (007) or ditch fills (009) (011). It is however possible some of the nail fragments recovered from the overlying deposit (005) may be Roman in date. The form of the road construction along with its alignment with other known sections of Roman road in the Tywi valley would clearly indicate that this represents the remains of the Roman road between Llandeilo and Carmarthen.
- 6.1.2 It would appear likely that the road would initially have stood at a higher level. The ditches to the north [010] and south [008] both appear to be cut from a level typically 0.2m to 0.3m above the level of the road surface (006) (007): it is unlikely that the road level would have been lower than the natural subsoil layers (003) (004) and, in particular, below the base level of the southern drainage ditch [008]. This would suggest that the road surface has either sunk into ground and/or upper surface has been eroded through use of the road, the subsequent robbing of stone or later agricultural activity. The former explanation appears most likely, as the larger stones (deposit 006) were revealed at slightly higher levels along the edges of the road surface and appear to have been worn away by the passage of traffic along the centre of the road. This suggests that that the road may have continued in use for some time after the Roman period. There was no close indication within the evaluated area to indicate when the road was abandoned, although the 16th to 17th century pottery recovered from the overlying deposit (005) does indicates the road was becoming inundated around this time, and may therefore have fallen out of use by the early post-medieval period. It is clear that the road had become covered by a significant depth of material by the later post-medieval period.

6.2 Conclusion and Recommendations

6.2.1 The remains of a Roman road uncovered during the evaluation traverse the route of the planned access track (along the eastern edge of the field under investigation). This feature clearly represents the remains of the Roman road between Llandeilo and Carmarthen. No features, finds or deposits of archaeological interest were revealed beyond the limits of the road as defined by its two flanking drainage ditches [008] [010].

- 6.2.2 The Roman road is considered to be of regional importance. It is therefore recommended that the remains of the road be left undisturbed *in situ* and are not disturbed by the proposed scheme.
- 6.2.3 Archaeological evidence associated with the road was encountered at *circa* 16.80mOD (*circa* 0.40m below ground level); this is the level of the top of the northern ditch cut [010]. The road surface itself was encountered below this level, at 16.64mOD. Typically the archaeological remains were overlaid with approximately 0.3m to 0.45m of later post-medieval alluvial and agricultural deposits.
- 6.2.4 The archaeological remains of the road correlate with a linear depression that is still clearly visible within the current field enclosure. Moreover, the alignment of the road can be easily identified on the ground. The results of the evaluation and analysis of surrounding typography indicate that the Roman road is well-preserved within and immediately beyond the development site.
- 6.2.5 It is anticipated that the surface of the planned access track will need to be raised above current ground levels. The road construction will therefore overlie the remains of the road, as the line of the road is defined by a linear depression between 0.2m and 0.5m below the general ground level. It is advised that any groundworks required along the line of the Roman road should be kept to a minimum, and should not exceed 0.30m in depth in order to avoid disturbing the known archaeological remains.

6.3 Storage and Curation

6.3.1 The project archive will be prepared in accordance with: *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (ClfA, 2014), the requirements of the National Monuments Record (Wales) and the *Management of Research Projects in the Historic Environment, MoRPHE* (Historic England, 2006). The archive will be deposited with Carmarthen Museum.

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Cartographic

Ordnance Survey	1888	1 st Edition 1:2,500 map Carmarthenshire
Ordnance Survey	1906	2 nd Edition 1:2,500 map of Carmarthenshire
Ordnance Survey	1953	1:10,560 map of Carmarthenshire
Ordnance Survey	1972	1:2,500 plan
Sayce, M.	1840	Abergwili Parish Tithe Map

Internet Sources

British Geological Survey: Geology of Britain Viewer http://mapapps.bgs.ac.uk/geologyofbritain/ (Accessed 13/06/16)

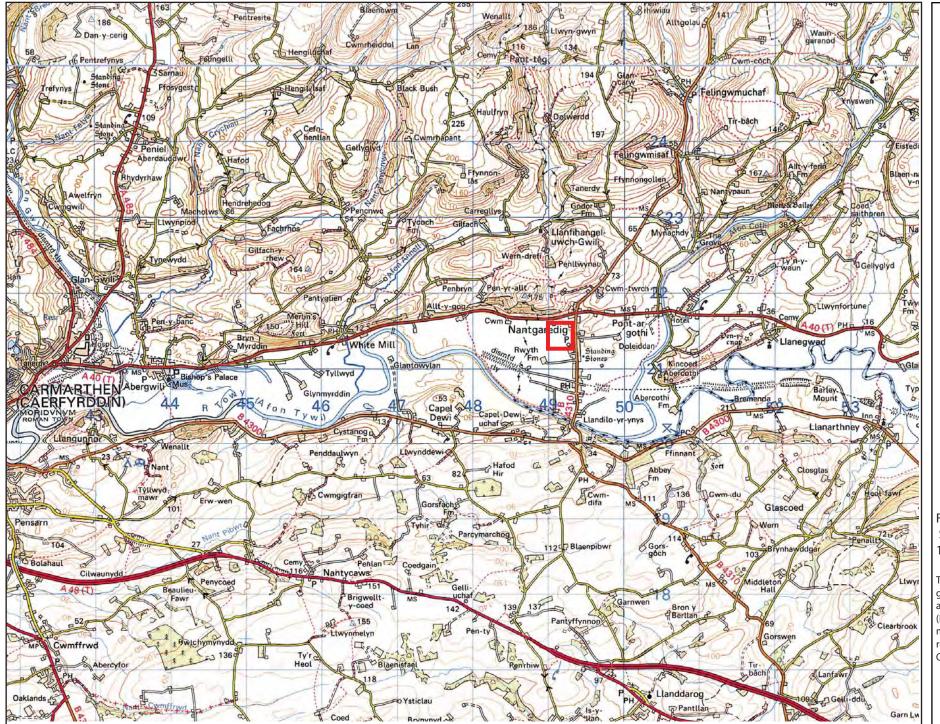


Figure 1: Location map. Site outlined in red. 1;10000 @ A4

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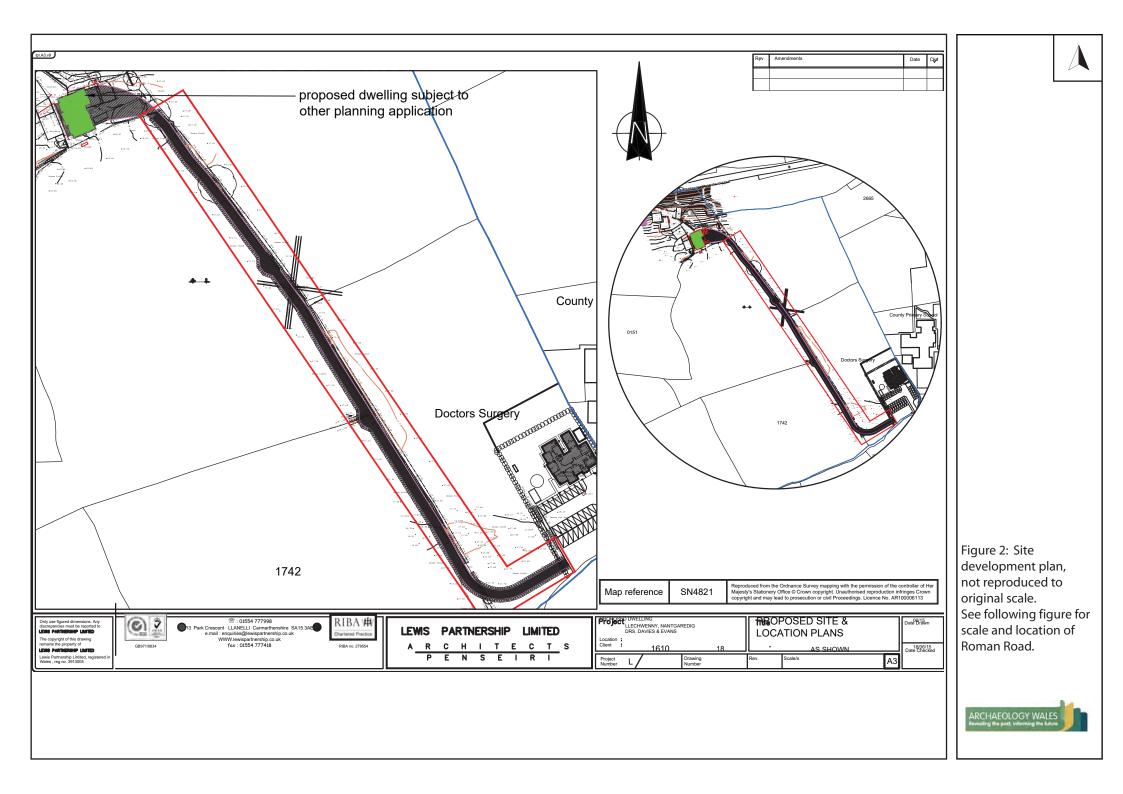


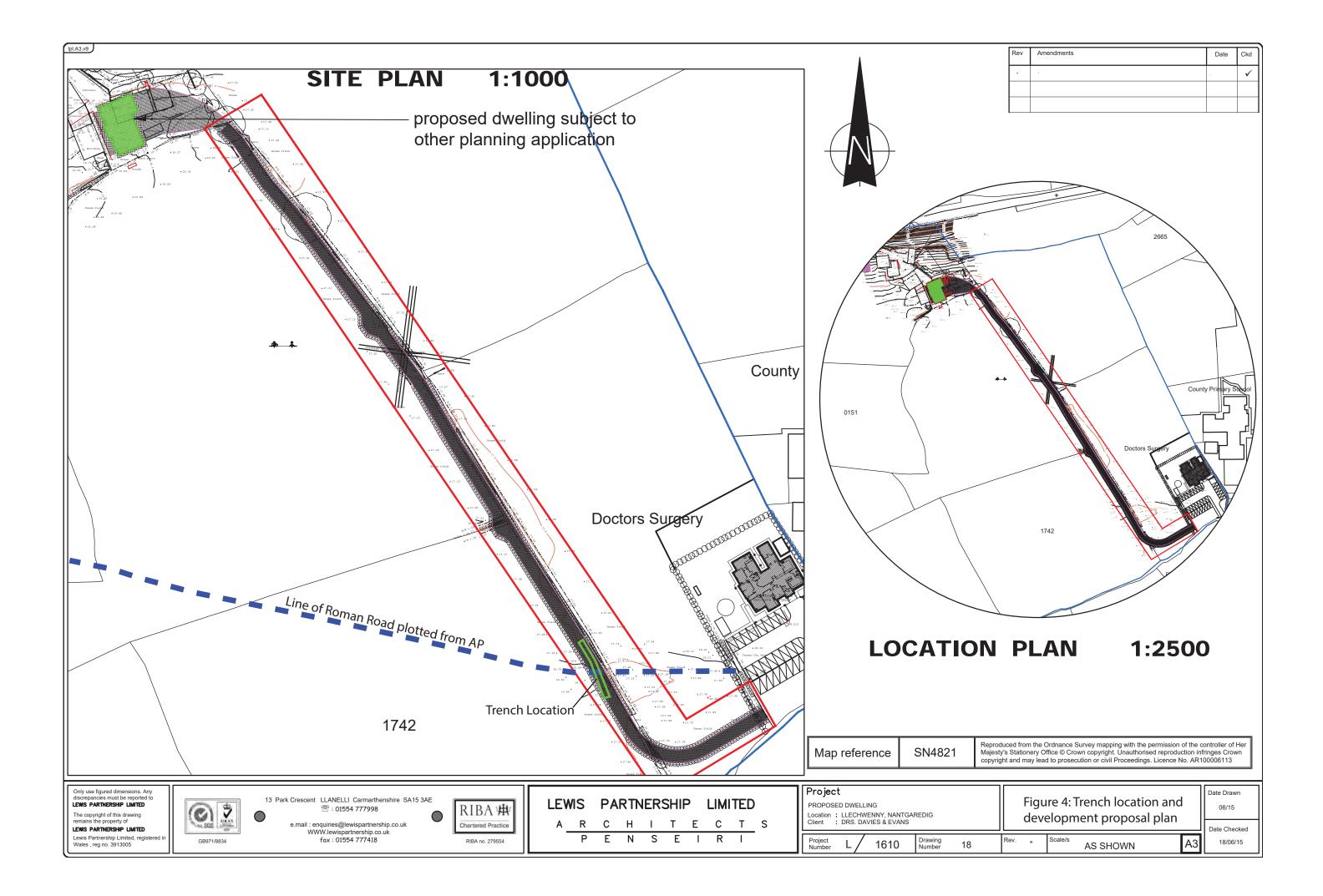


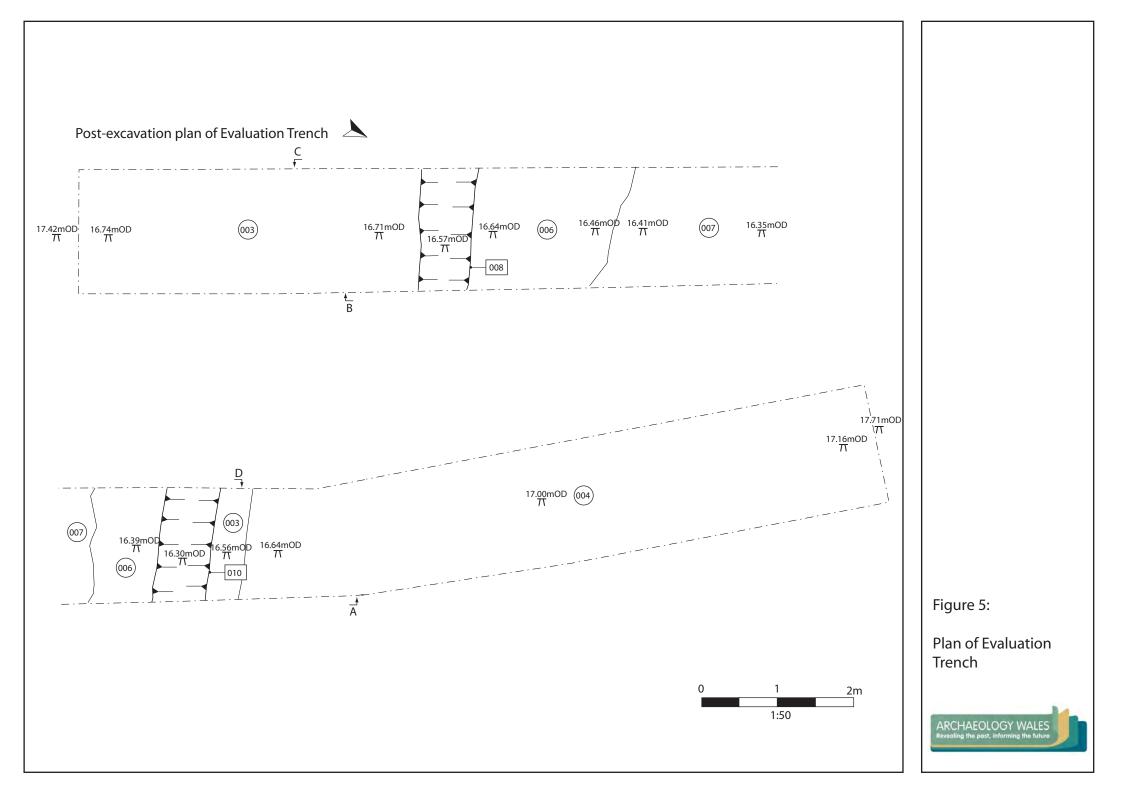
Figure 3: Aerial image (from Google Earth) showing the line of the Roman Road, outlined in red.

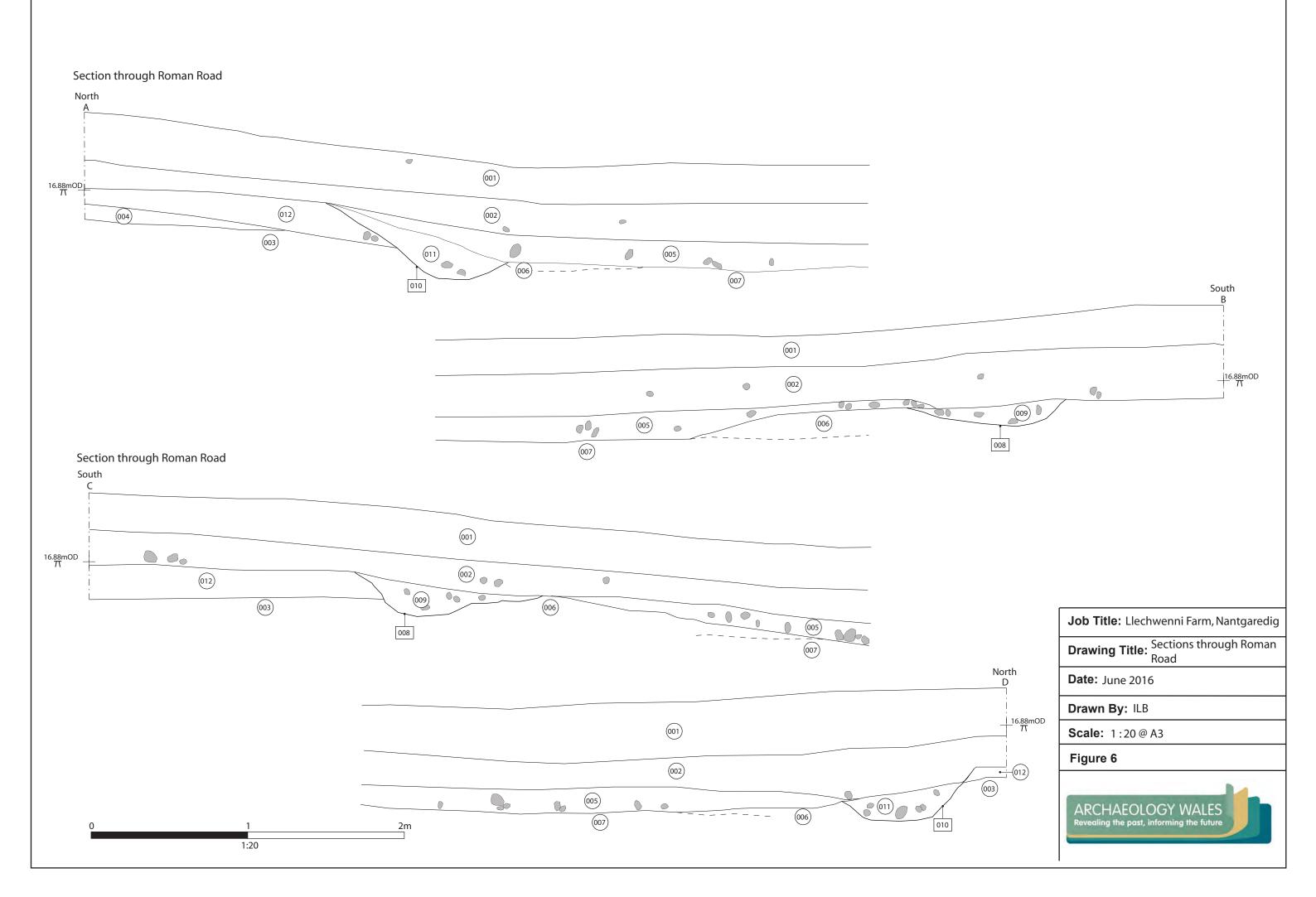
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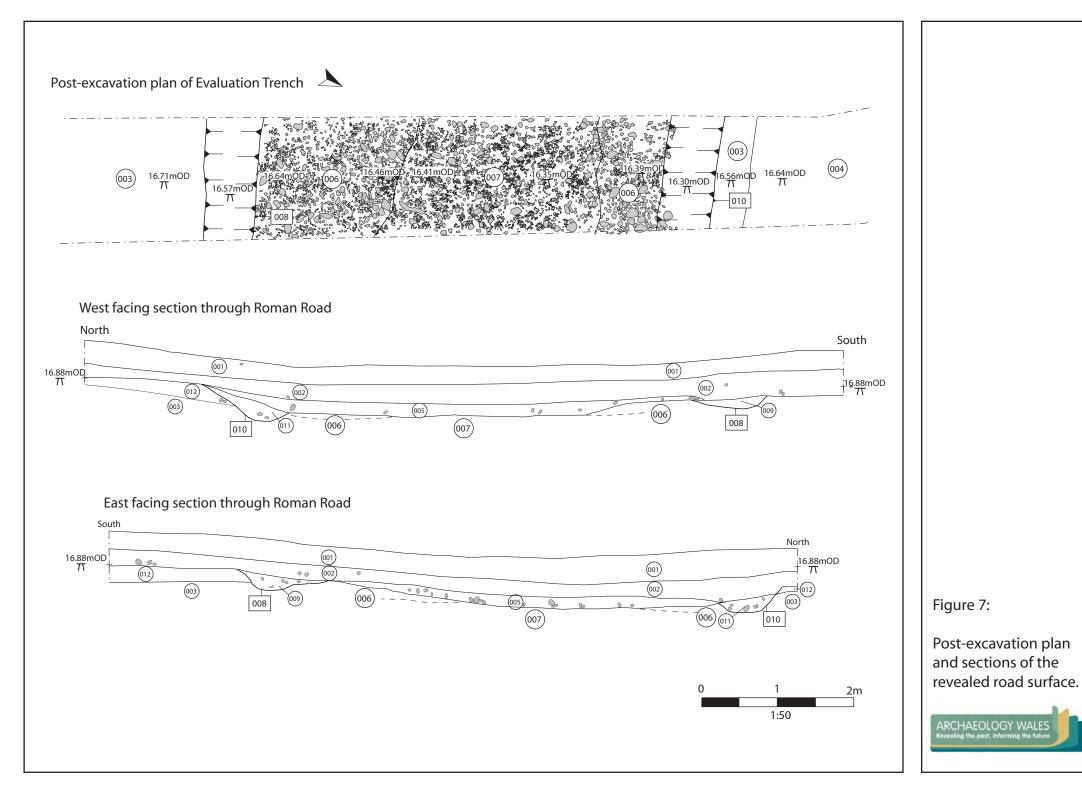




Photo 1: View west-north-west along the linear depression representing the line of the Roman road, within the fields to the northwest of the site.



Photo 2: View east-south-east along the linear depression representing the line of the Roman road approaching the evaluation trench (surrounded by orange fencing).



Photo 3: View north across the excavated area towards Llechwenni Farm in the background, with the current A40 running along the ridge just above the farm buildings. The planned new trackway will run alongside the hedgeline to the right of the trench.



Photo 4: View north along the evaluation trench. 1m scales.



Photo 5: View south along the evaluation trench. 1m scales.



Photo 6: View south across the revealed road surface (006/007), with unexcavated ditch 010 in the foreground. 1m scales



Photo 7: View southwest across the revealed road surface (006/007). 1m scales.



Photo 8: View west, close-up of southern part of road surface 006/007. 1m scales.



Photo 9: View west, close-up of central area of road surface 007. 1m scales.



Photo 10: View west, close-up of northern part of road surface 006/007. 1m scales.



Photo 11: Post-excavation shot of ditch 008, view east. 1m scale.



Photo 12: Post-excavation shot of ditch 008, view west. 1m scale.



Photo 13: Post-excavation shot of ditch 010. View west. 1m scale.



Photo 14: Post-excavation shot of ditch 010. View east. 1m scale.

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> APPENDIX I: Context List

Context Descriptions

Context Number	Context Type	Description	Dimensions (Length x width x thickness)
001	Layer	 Topsoil Loose, dark brown silty-clay Common, small sub-rounded stone 	Across trench (>20m x >1.8m), 0.2m thick
002	Layer	 Subsoil Moderate, mid brown silty-clay Rare, small sub-angular and sub-rounded stone 2 x 15th/16th cent. pot sherds 2 x 16th/17th cent. pot sherds Fe object 1 x 18th/19th cent. clay pipe stem 	Across trench (>20m x >1.8m), 0.28m thick
003	Layer	 Natural geological subsoil Moderate to fairly compact, light brown silty- clay Abundant, small sub-rounded stone. 	Across trench (>15m x >1.8m), base not reached
004	Layer	 Natural fluvial deposit Moderate, mid to light orange-brown silty clay Rare, small charcoal flecks 	Across northern end of trench (>12m x >1.8m), base not reached
005	Layer	 Post-med soil layer overlying road surface Moderate, mid brown silty-clay Rare, small sub-rounded stone 6 x 16th/17th cent. pot sherds 11 x fe objects, inc 2 x possible shoe nails, 6 x heavily corroded possible shoe nails & 3 x nails 	6.6m x >1.8m, 0.18m thick
006	Road deposit	 Upper road deposit Compact, light to mid brown silty-clay Very abundant (80%) small sub-rounded stone. 	5.3m x >1.8m, base not reached
007	Road deposit	 Underlying road deposit Very compact, dark grey silty-clay Very abundant (90%), small sub-rounded stone/gravel 	5.3m x >1.8m, base not reached
008	Cut	 Roadside ditch Linear, straight parallel sides, orientated WSW - ENE Moderate straight to concave sides. Gentle break of slope to a shallow concave base Contains single fill (009) Cuts deposits 003 and 012 	>1.8m x 0.7m 0.27m deep
009	Fill	 Fill of ditch 008 Moderate, mid brown silty-clay Rare, small sub-rounded stone. 	>1.8m x 0.7m 0.27m thick

010	Cut	 Roadside ditch Linear, straight parallel sides, orientated WSW - ENE Moderate concave to staright sides. Gentle break of slope to a shallow concave base Contains single fill (011) Cuts deposits 003 and 012 	>1.8m x 0.75m 0.2m to 0.4m deep
011	Fill	 Fill of ditch 010 Fairly compact, mid-brown silty-clay Rare, small to medium sub-rounded stone Rare, small charcoal flecks 2 x heavily corroded fe object 	>1.8m x 0.75m 0.4m thick
012	Layer	 Subsoil/fluvial deposit Moderate, mid-grey silty-clay Rare, small sub-rounded stone 	>11.7m x >1.8m, 0.22m thick

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> **APPENDIX II: Finds Catalogue**

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Finds catalogue Llechwenni Farm, Nantgaredig

Site code: P2434 - LFN/16/EV

Number Pottery	Context	Description	Amount	Weight	Kept/Disc.
•	002	Gravel Tempered Ware - 15th/16th C.	2	38	Kept
	002	Ligth brown glazed red earthenware - 16th/17th C.	2	18	Kept
	005	Ligth brown glazed red earthenware - 16th/17th C. (2 glazed, 4 heavily worn)	6	13	Kept
Metal	002	Heavily corroded Fe object	1	206	Kept
	005	Possibly iron nails: 2 possible Roman Shoe nails	11	34	Kept
		3 nails (longer than Roman Shoe nail) 6 heavily corroded (possible) nails			
	011	Heavily corroded Fe objects	2	21	Kept
Tobacco Clay Pipe					
	002	Clay pipe stem	1	2	Disc.
		Total finds:			
		Pottery	10		
		Metal	14		
		Tobacco Clay Pipe	1		
		Total:	25		

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APPENDIX III: Written Scheme of Investigation

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WRITTEN SCHEME OF INVESTIGATION

FOR AN ARCHAEOLOGICAL EVALUATION

AT

Llechwenni Farm, Nantgaredig, Carmarthenshire

Prepared for:

Lewis Partnership

28th April 2016

Archaeology Wales Limited The Reading Room, Town Hall Great Oak Street, Llanidloes, Powys SY18 6BN Tel: +44 (0) 1686 440371 Email: phil@arch-wales.co.uk

NON TECHNICAL SUMMARY

This Written Scheme of Investigation (WSI) details the proposal for programme of intrusive archaeological trial trench evaluation designed to investigate features of potential significance associated with the installation of a new access track at Llechwenni Farm, Nantgaredig, Carmarthenshire. It has been prepared by Archaeology Wales Limited for Lewis Partnership.

1. Introduction and archaeological background

The scope of the construction work to be undertaken at the site (NGR SS 75415 97558) includes the creation of a new access road for Llechwenni Farm from the southeast, via an existing Doctors Surgery (Figures 1 & 2). The planning application number is E/32254 and the planning authority is Carmarthenshire County Council (CCC).

This WSI has been prepared by Philip Poucher, Project Manager, Archaeology Wales Ltd (henceforth - AW) at the request of Lewis Partnership. It provides information on the methodology that will be employed by AW during an archaeological evaluation at the site.

The methodology set out in this WSI will be agreed with the planning services division of Dyfed Archaeological Trust (DAT-PS), in their capacity as archaeological advisors to the local planning authority, prior to the commencement of groundworks due to be carried out on the site. The requirements for an archaeological investigation has been set as one of the conditions of the planning permission for the site, it states (Condition 6):

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 by the applicant and approved in writing by the local planning authority.

Reason: To protect historic environment interests which enabling development.

Further to which DAT-PS recommend, in a letter to CCC dated 20/7/15, that this work should comprise a pre-commencement field evaluation. The purpose of the proposed archaeological evaluation is to provide the local planning authority with the information that they have requested from the client in response to their planning application, the requirements for which are set out in Planning Policy Wales (revised edition 8, 2016), Section 6.5, and Welsh Office Circular 60/96.

All work will conform to the CIFA's Standards and Guidance for Archaeological Field Evaluation (CIFA 2014), and be undertaken by suitably qualified staff to the highest professional standards.

2. Site description and historic background

The site lies to the southwest of the village of Nantgaredig in central Carmarthenshire, centred on SN 49189 21548. This lies on the northern edge of the relatively flat valley base of the Tywi Valley. The village itself is a largely ribbon development that lies alongside the B4310 and the crossroads with the A40.

Llechwenni Farm lies alongside the A40 and is currently accessed off that road. This access will be blocked off, and a new access route will be cut from the B4310 via and existing Doctors Surgery to the southeast of the farm.

Carmarthen lies around 4m (6.4km) along the A40 to the west, Llandeilo lies around 9 miles (14.4km) along the A40 to the east.

The bedrock geology of the area comprises largely mudstones of the Felin Wen Formation, along with bands of Felsic Tuff and limestone of the Asaphus Ash Formation. This is overlain by sand and gravel alluvium and river terrace deposits (BGS 2016).

Prehistoric activity is recorded in the area. A Neolithic or Bronze Age henge monument lies on the eastern edge of Nantgaredig (PRN 1754), within 300m to the southwest of the start of the access track. Further Bronze Age standing stones are also recorded dotting the surrounding landscape, and a possible round barrow burial mound is also recorded 150m to the northeast of the access track.

Roman activity is also recorded in the area, and the line of a Roman road (PRN 33946), connecting Carmarthen and Llandeilo, is visible on aerial photography crossing the line of the access track at SN 49234 21446 (see Figure 3). This line is preserved as field boundaries to the west, and as the trackway to Doleiddan to the east. This forms the main feature of archaeological interest within the development area.

The remaining archaeological potential for this area is largely associated with the post-medieval development of Nantgaredig.

3 Site specific objectives

The primary objectives of the work will be to locate and describe, by means of strategic trial trenching, archaeological features that may be present within the development area. The work will elucidate the presence or absence of archaeological material, its character, distribution, extent, condition and relative significance.

The work will include an assessment of regional context within which the archaeological evidence rests and will aim to highlight any relevant research issues within national and regional research frameworks.

The work will result in a report that will provide information of sufficient detail to allow informed planning decisions to be made which can safeguard the archaeological resource.

Dependent on the results of the archaeological evaluation further archaeological mitigation measures may be required. Preservation *in situ* will be advocated where at all possible, but where engineering or other factors result in loss of archaeological deposits, preservation by record will be recommended. If more extensive archaeological potential is highlighted through the evaluation, then more extensive evaluation or an archaeological watching brief may be recommended for the planned development.

4 Evaluation Methodology

<u>General</u>

The proposed archaeological work will be concentrated on accessible areas that are likely to contain the greatest archaeological potential.

The aim of the work will be to establish and make available information about the archaeological resource existing on the site. The work will include the following elements:

- A programme of strategic trial trenching (Stage 1)
- The production of an illustrated report and the deposition of the site archive (Stage 2)

5 Method statement for Strategic Trial Trenching (Stage 1)

Preliminary work

The archaeological project manager in charge of the work will satisfy him/herself that all constraints to ground works have been identified, including the siting of live services.

The agreed evaluation areas will be positioned to maximise the retrieval of archaeological information and to ensure that the archaeological resource is understood.

It is proposed that a single trench will be excavated within the planned development area (Figure 4). This trench will be located on the projected line of the Roman road. The Roman road itself can be relatively accurately located as the line appears on aerial photography in close proximity to the site area and is preserved in nearby field boundary lines, suggesting a straight course across the proposed track. The trench will measure 20m by 2m, and will cross the line of the projected road at a slight angle in order to keep the evaluated area within the planned development boundaries.

The exact positioning of the trenches will depend on the position of any extant services or other obstructions that come to light during the initial phase of ground works. The locations and dimensions of the trenches will be agreed with DAT-PS prior to the commencement of works.

Evaluation

The evaluation areas will be excavated to the top of the archaeological horizon by machine fitted with a toothless grading bucket under close archaeological supervision.

All areas will be subsequently hand cleaned using pointing trowels and/or hoes to prove the presence, or absence, of archaeological features and to determine their significance. The excavation of the minimum number of archaeological features will be undertaken, to elucidate the character, distribution, extent and importance of the archaeological remains. As a minimum small discrete features will be fully excavated, larger discrete features will be half-sectioned (50% excavated) and long linear features will be sample excavated along their length - with investigative excavations distributed along the exposed length of any such feature and to investigate terminals, junctions and relationships with other features. Should this percentage excavation not yield sufficient information to allow the form and function of archaeological features/deposits to be determined full excavation of such features/deposits will be

required.

Sufficient excavation will be undertaken to ensure that the natural horizons are reached and proven, where this can be practically and safely achieved. If safety reasons preclude manual excavation to natural, hand augering may be used to try to assess the total depth of stratification within each area. The depth of the excavation must conform to current safety requirements. If excavation is required below 1.2m the options of using shoring will be discussed with DAT-PS.

Recording will be carried out using Archaeology Wales recording systems (pro-forma context sheets etc), using a continuous number sequence for all contexts.

Written, drawn and photographic records (b&w, 35mm colour slides and digital) of an appropriate level of detail will be maintained throughout the course of the project. Digital photographs will be taken using a 14MP camera with photographs stored in Tiff format.

Plans and sections will be drawn to a scale of 1:50, 1:20 and 1:10 as required, and these will be related to Ordnance Survey datum and published boundaries where appropriate.

Monitoring

DAT-PS will be contacted approximately one week prior to the commencement of ground works, and subsequently once the work is underway.

Any changes to the specification that the contractor may wish to make after approval will be communicated to DAT-PS for approval on behalf of Planning Authority.

Representatives of DAT-PS will be given access to the site so that they may monitor the progress of the field evaluation. No area will be back-filled, until DAT-PS has had the opportunity to inspect it, unless permission has been given in advance. DAT-PS will be kept regularly informed about developments, both during the site works and subsequently during post-excavation.

Recording

Recording will be carried out using AW recording systems (pro-forma context sheets etc), using a continuous number sequence for all contexts.

Plans and sections will be drawn to a scale of 1:50, 1:20 and 1:10 as required and related to Ordnance Survey datum and published boundaries where appropriate.

All features identified will be tied in to the OS survey grid and fixed to local topographical boundaries. This can be achieved through measured triangulation from various points within the site boundary due to the proximity of extant buildings and other permanent features and their known locations. If required this could be further supplemented using a Topcon GTS725 total station.

Photographs will be taken in digital format, using a 14MP camera with photographs stored in Tiff format.

The archaeologists undertaking the evaluation will have access to the AW metal detector and be trained in its use.

<u>Artefacts</u>

Archaeological artefacts recovered during the course of the excavation will be cleaned and labelled using an accession number, which will be obtained from a suitable museum. A single number sequence will be allocated to all finds. The artefacts will be stored appropriately until they are deposited with a suitable local museum. Contact will be made with the County Museum in Carmarthen for this purpose. If no suitable local repository exists then attempts will be made to deposit the artefacts at the National Museum, Cardiff. In the interim any recovered artefacts will be stored in secure **premises at AW's offices.**

A catalogue by context of all artefactual material found, quantified by number, weight, or both, and containing sketches of significant artefacts will be compiled.

All finds of gold and silver will be removed to a safe place and Natural Resources Wales, Cadw and the local coroner informed, within the guidelines of the Treasure Act 1996.

Any finds which are considered to be in need of immediate conservation will be referred to a UKIC qualified conservator (Phil Parkes at Cardiff University).

The requirements for the conservation of artefacts will be unpredictable until after the completion of the fieldwork. The archaeological contractor will ensure, however, that at least minimum acceptable standards are achieved (the UK Institute of Conservation's Guidelines for the Treatment of Finds from Archaeological Site should be used as guidance).

Human remains

Human remains will be left *in situ*, covered and protected when discovered. No further investigation should normally be permitted and DAT-PS and the local Coroner must be informed immediately. After discussion, it may be appropriate to take bone samples for C14 dating. If removal is essential it can only take place under the appropriate Ministry of Justice and Environmental Health regulations.

Environmental and technological samples

Samples will be taken where necessary when significant deposits are located. These will be retained for processing. The level of post-excavation processing will be dependent on the results of the field evaluation and following discussion with an environmental specialist and DAT-PS.

Any features containing deposits of environmental or technological significance will be sampled. If required, the project manager will arrange, through a suitably qualified expert the assessment of the environmental potential of the site through examination of suitable deposits. The assessment of potential should consider the guidelines set out in the English Heritage publication 'Guidelines for Environmental Archaeology' March 2002.

<u>Specialists</u>

In the event of certain finds/features etc. being discovered, the site archaeologist may have to seek specialist opinion for assistance. Such specialists will be accessed either

Туре	Name	Tel No.
Flint	Dr Amelia Pannett	02920 899509
Animal bone	Jen Kitch	07739 093712
CBM, heat affected clay, Daub etc.	Rachael Hall	01305 259751
Clay pipe	Hilary Major	01376 329316
Glass	Andy Richmond	01234 888800
Cremated and non- cremated human bone	Malin Holst	01759 368483
Metalwork	Kevin Leahy	01652 658261
Neo/BA pottery	Dr Alex Gibson	Bradford University
IA/Roman pottery	Jane Timby	01453 882851
Post Roman pottery	Mr Stephen Clarke	
Charcoal (wood ID)	John Carrot	01388 772167
Waterlogged wood	Nigel Nayling	University of Wales (Lampeter)
Molluscs and pollen	Dr James Rackham	01992 552256
Charred and waterlogged plant remains	Wendy Carruthers	01443 233466

internally within AW itself or from an external source. A list of external specialists is given in the table below.

<u>Conservation</u>

All archaeologically recovered artefacts, building materials, industrial residues, environmental material, biological remains (including human remains) and decay products (collectively referred to as 'finds') will be conserved following the guidelines set out in 'Standard and Guidance for the collection, documentation, conservation and research of archaeological materials' (CIFA, 2014).

6 Method statement for the production of an illustrated report and the deposition of the site archive (Stage 2)

Report preparation

The report will contain the following:

- A fully representative description of the information gained from Stage 1 above, even if there should be negative evidence.
- A concise non-technical summary of the project results. This can be presented in Welsh to meet any Welsh language policy requirements.
- At least one plan showing the site's location in respect to the local topography, as well as the position of all excavated areas.
- Suitably selected plans and sections of significant archaeological features. All plans and sections should be related to Ordnance Datum.
- Written descriptions of all features and deposits excavated and their considered interpretation.
- A summary report on the artefactual and ecofactual assemblage and an assessment of its potential for further study, prepared by suitably qualified

individuals or specialists.

- A statement of the local and regional context of the archaeological remains identified.
- An impact assessment, with mitigation proposals, of the proposed development on the archaeological resource can be considered and presented for consideration. This could include the mapped archaeological potential of the site in relation to the proposed development.

Copies of the report will be sent to Dr Anthony Davies, Lewis Partnership, the local planning authority, and DAT for inclusion in the HER. Digital copies will be provided in pdf format if required.

A summary report of the work will be submitted for publication to a national journal (eg Archaeology in Wales) no later than one year after the completion of the work.

The site archive

A project archive will be prepared in accordance with the National Monuments Record (Wales) agreed structure and be deposited within an appropriate local museum on completion of site analysis and report production. It will also conform to the **CIFA's** Standards & Guidance for the creation, compilation, transfer and deposition of archaeological archives (2014) and guidelines set out in 'Management of Archaeological Projects Two, Appendix 3' (English Heritage 1991).

Arrangements will be made with the local museum before work starts. Wherever the archive is deposited, this information will be relayed to the HER.

Although there may be a period during which client confidentiality will need to be maintained, the report and the archive will be deposited not later than six months after completion of the work.

Other significant digital data generated by the survey (ie AP plots, EDM surveys, CAD drawings, GIS maps, etc) will be presented as part of the report on a CD/DVD. The format of this presented data will be agreed with the curator in advance of its preparation.

7 Resources and timetable

<u>Standards</u>

The field evaluation will be undertaken by AW staff using current best practice.

All work will be undertaken to the standards and guidelines of the CIFA.

<u>Staff</u>

The project will be undertaken by suitably qualified AW staff. Overall management of the project will be undertaken by Philip Poucher.

<u>Equipment</u>

The project will use existing AW equipment.

Timetable of archaeological works

The evaluation will be undertaken at the convenience of the client. A start date of early May 2016 is considered likely.

Insurance

AW holds Public Liability Insurance through Aviva Insurance Ltd, with a £5,000,000 Limit of Indemnity (expires 05/12/16), Employers Liability Insurance through Aviva Insurance Ltd, with a £10,000,000 Limit of Indemnity (expires 05/12/16) and Professional Indemnity Insurance though Hiscox Insurance Company Ltd, with a £1,000,000 Limit of Indemnity (expires 05/12/16).

<u>Arbitration</u>

In the event of any dispute arising out of this Agreement (including those considered as such by only one of the parties) either party may forthwith give to the other notice in writing of such a dispute or difference and the same shall be and is hereby referred for decision in accordance with the Rules of the Chartered Institute of **Arbitrators' Arbitration scheme for the Institute for Archaeologists applying at the** date of this Agreement.

Health and safety

All members of staff will adhere to the requirements of the *Health & Safety at Work Act*, 1974, and the Health and Safety Policy Statement of AW. A site-specific risk assessment will be compiled prior to attendance on site.

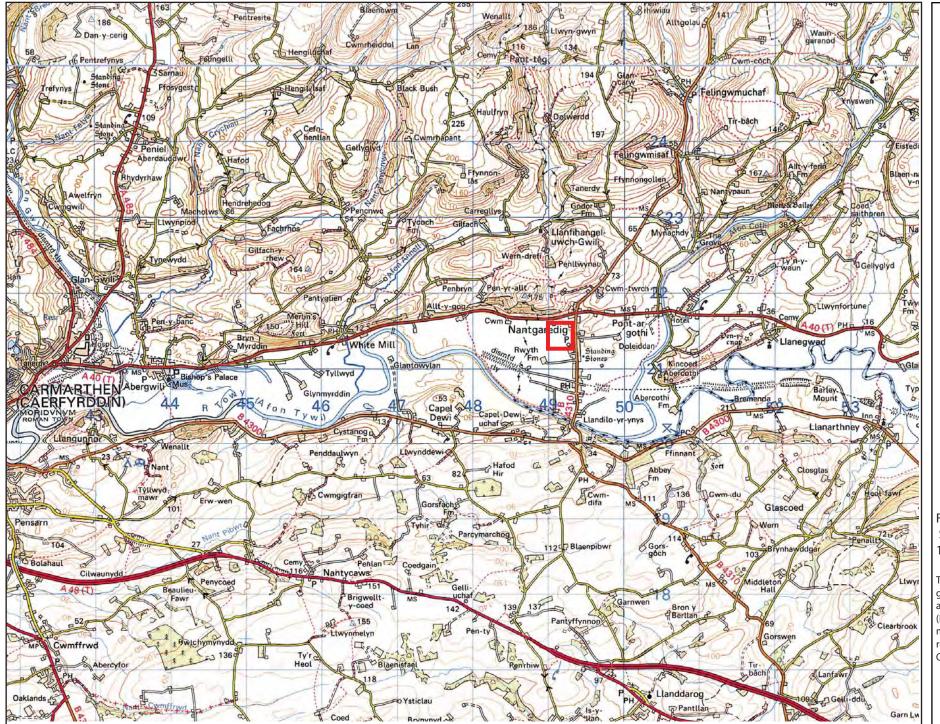


Figure 1: Location map. Site outlined in red. 1;10000 @ A4

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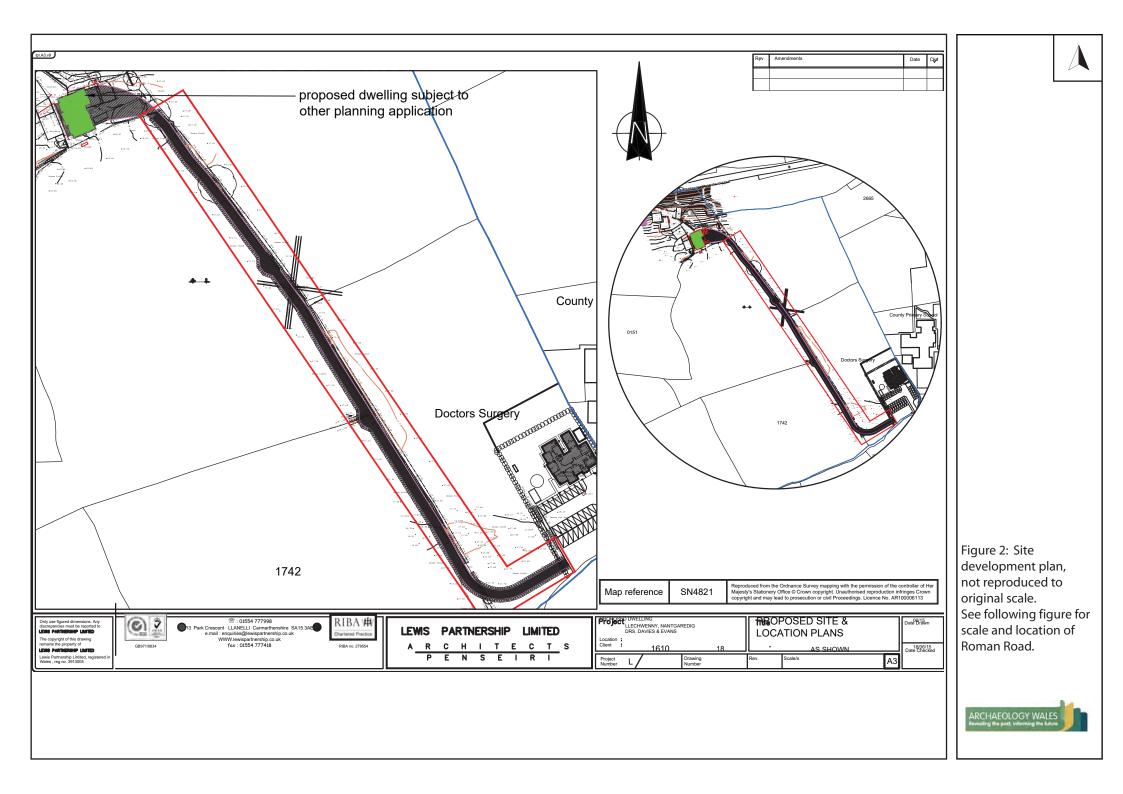


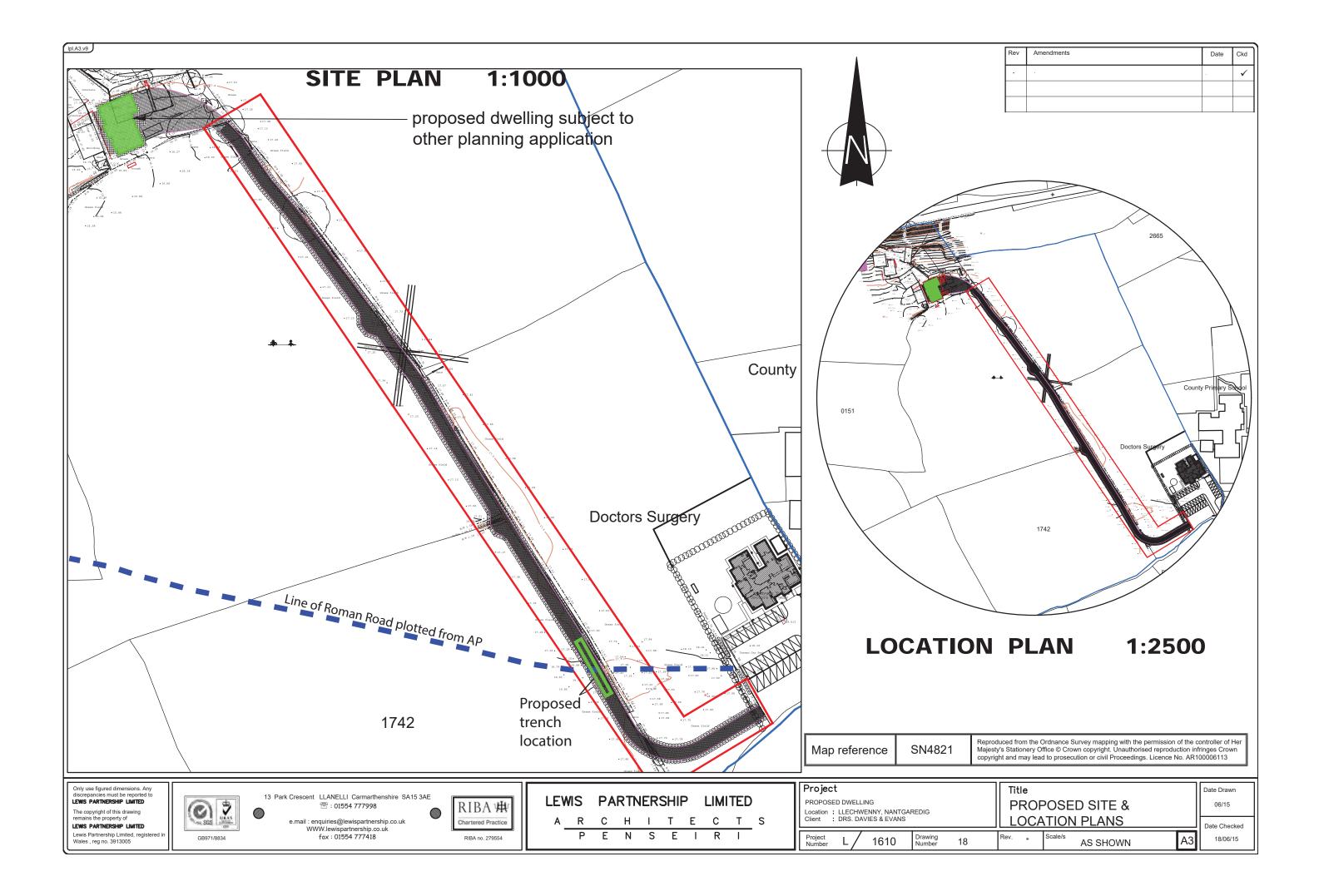


Figure 3: Aerial image (from Google Earth) showing the line of the Roman Road, outlined in red.

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APPENDIX IV: Archive Cover Sheet

ARCHIVE COVER SHEET

Llechwenni Farm, Nantgaredig, Carmarthenshire

Site Name:	Llechwenni Farm, Nantgaredig
Site Code:	LFN/16/EV
PRN:	33946 (Tywi Valley Roman Road)
NPRN:	401741 (Twyi Valley Roman Road)
SAM:	-
Other Ref No:	RR623 (Margary)
NGR:	NGR SN 49189 21548
Site Type:	Roman Road
Project Type:	Evaluation
Project Manager:	Philip Poucher
Project Dates:	May 2016 - June 2016
Categories Present:	?Roman to Post-Medieval
Location of Original Archive:	AW
Location of duplicate Archives:	Paper copies with RCAHMW, Aberystwyth with duplicate copies along with the finds at Carmarthen Museum
Number of Finds Boxes:	1
Location of Finds:	Carmarthen Museum.
Museum Reference:	TBC
Copyright:	AW
Restrictions to access:	None

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