Archaeology Wales

Land adjacent to Craig Y Don Estate, Amlwch, Anglesey

Archaeological Evaluation

By
Niall O'Brien, Siobhan Sinnot & Francesca Ward

Report No. 1750

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Archaeological Evaluation

Prepared for: Isle of Anglesey County Council

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Contents

Non-technical Summary

Archaeology Wales Ltd carried out an archaeological field evaluation from the 18th to the 20th of December 2018 at the request of Isle of Anglesey County Council (IoACC). The programme of intrusive trial trench evaluation was undertaken to provide IoACC with information regarding the archaeological potential of the site prior to commencement of Contaminated Land remediation at Craig Y Don Estate, Amlwch. The site is centred on NGR SH 44751 93225. Four trail trenches were hand excavated across the site to a maximum depth of 0.3m below ground level.

The development area is currently comprised of 112 residential properties. The area is situated on land that had been previously been the Mona Smelting Works. The smelter was built around 1786 and served the copper industry centred on Parys Mountain. Smelting ceased by 1897 but the company continued to manufacture fertilisers until the factory closed around 1910. GAPS reviewed aerial photographs and cartographic evidence and noted that the remains of building foundations and railway structures may survive in the development area.

Remains associated with the factory foundations were found in all the trenches. Trench 1 revealed a layer of debris below the topsoil including broken bricks, cobbles and fragments of mortar. Trench 2 contained a hard-flat surface below the topsoil. Trench 3 revealed a sewage drain, a hard sandstone surface and a deposit of building debris. Trench 4 contained a brick and cobbled surface.

All work conformed to Standard and Guidance for Archaeological Field Evaluation (CIfA 2014) and Standards and Guidance for Archaeological Artefact and Environmental Collection, Documentation Conservation and Research (CIfA 2014).

Crynodeb Annhechnolegol

Cynhaliodd Archeoleg Cymry werthusiad maes archeolegol o'r 18fed hyd at y 20fed o Ragfyr 2018 ar gais Cyngor Sir Ynys Môn (IoACC). Cynhaliwyd y rhaglen o werthusiad ffosydd treial ymwthiol i roi gwybodaeth i IoACC ynghylch potensial archeolegol y safle cyn i waith Adfer ar Dir Halogedig gael ei wneud yn Graig y Don Estate, Amlwch. Mae'r safle wedi'i ganoli ar NGR SH 44751 93225. Cafodd pedair ffos treial eu cloddio gyda llaw ar draws y safle hyd at ddyfnder o 0.3m yn is na lefel presennol y ddaear.

Ar hyn o bryd mae'r ardal datblygu yn cynnwys 112 o gartrefi preswyl. Mae'r ardal wedi'i lleoli ar dir a oedd wedi'i lleoli lle oedd arfer Gweithfeydd Monda Smelting. Adeiladwyd yr arogldarth tua 1786 ac roedd yn gwasanaethu'r diwydiant copr oedd yn canoli ar Fynydd Parys. Fe wnaeth y mwyndoddi terfynu erbyn 1897 ond parhaodd y cwmni weithgynhyrchu gwrteithiau nes i'r ffatri cau tua 1910. Fe wnaeth GAPS adolygu awyrluniau a ffynonellau cartograffeg ac awgrymwyd y gallai gweddillion sylfeini adeiladau a strwythurau rheilffyrdd wedi goroesi yn yr ardal datblygu.

Cafodd olion a oedd yn gysylltiedig â'r sylfeini'r ffatri eu darganfod ym mhob un o'r ffosydd. Datgelodd Ffos 1 haen o rwbel islaw'r uwchbridd gan gynnwys brics toredig, coblau a darnau o forter. Roedd Ffos 2 yn cynnwys arwyneb gwastad called o dan yr uwchbridd. Fe wnaeth Ffos 3 datgelu draen carthion, arwyneb tywodfaen called a chramen o falurion adeilad. Roedd Ffos 4 yn cynnwys arwyneb brics a choblau.

Roedd yr holl waith yn cydymffurfio â'r Standard and Guidance for Archaeological Field Evaluation (CIfA 2014) a hefyd Standards and Guidance for Archaeological Artefact and Environmental Collection, Documentation, Conservation and Research (CIfA 2014).

Figures

Plates

1. Introduction

In December 2018 Archaeology Wales was commissioned to undertake a trenching evaluation at the request of Isle of Anglesey County Council (IoACC) prior to commencement of Contaminated Land remediation at Craig - Y - Don Estate, Amlwch. The site is centred on NGR SH 44751 93225.

Four trial trenches each measuring 2m in width and 4m in length were excavated across the site to a maximum depth of 0.3m below ground level, or less if archaeological deposits were encountered sooner.

The methodology in this report was agreed with Gwynedd Archaeological Planning Service (GAPS) in its capacity as archaeological advisors to the IoACC. This programme of works was carried out to inform about the requirements and scope of further mitigation measures, if required.

All work was undertaken to the Standards and Guidance set by the Chartered Institute for Archaeologists (2014). AW is a Registered Organisation with the CIfA.

2. Site description and archaeological background

- Location, Topography and geology

The development area is currently defined by 112 residential properties. The area is situated on land that had been previously been the Mona Smelting Works. The site is bounded by residential housing to the immediate south. Amlwch sports and social club, a green field area is located to the north. The site is bounded to the west by a sparsely wooded area, and to the east by Amlwch Port. Amlwch Port windmill is located to the northeast of the site.

The New Harbour Group - Mica Schist and Psammite - underlays the site. This group consists of metamorphic bedrock formed approximately 541 to 635 million years ago in the Ediacaran Period. These rocks were sedimentary in origin, possibly graded sediments or turbiditic flows in a deep-marine environment but have subsequently undergone metamorphism. No superficial soils are recorded (BGS 2018).

- Archaeological and historical background

The development Craig - y - Don Estate area is situated on land that had been previously been the Mona Smelting Works. The smelter was built around 1786 and served the copper industry

centred on Parys Mountain. A fire was reported in a local newspaper in 1893. The outline of the foundry structure can be clearly seen on the 1889 Ordnance Survey map (Figure 2). Around 1887 Henry Hills and Son took over the lease of the site and although smelting had ceased by 1897 the company continued to manufacture fertilisers until the factory closed around 1910 (Figure 4 shows the remains of the building structure). The site was affectionately known as "Gwaith Hills" for several years and this remains in living memory of many Amlwch residents.

GAPS have reviewed the 1889, 1900 and 1924 maps and the 1945 aerial photographs. Building foundations as shown on the 1924 overlay survived up until the construction of Craig - y - Don Estate and it seems highly likely that remains survive at very shallow depths within some of the gardens. The map evidence indicates that structural elements may survive in the rear gardens of Nos. 3, 11 and 26 and in the front gardens of 38, 92, 94 and 95. These remains were identified during the excavations of the four hand dug trenches. There is also the possibility that the rear gardens of 92, 94 & 95 may contain the remains of rail infrastructure – whilst the rails appear to have been removed prior to 1900, sleepers are still marked at this point (although not marked on later maps) and some buried evidence of the railway may therefore survive.

3. Aims and Objectives

All work was undertaken to the standards set out by The Chartered Institute for Archaeologist's *Standard and Guidance for Archaeological Field Evaluation* (2014).

The objective of the intrusive trial trench evaluation was to locate and describe, by means of strategic trial trenching, archaeological features that may be present within the development area. The work elucidated the presence or absence of archaeological material, its character, distribution, extent, condition and relative significance. The work included an assessment of regional context within which the archaeological evidence rests and aimed to highlight any relevant research issues within national and regional research frameworks.

The intrusive trial trench evaluation resulted in this report that which provides information of sufficient detail to allow informed planning decisions to be made which can safeguard the archaeological resource.

4. Methodology

The work was undertaken to meet the standard required by The Chartered Institute for Archaeologist's *Standard and Guidance for Archaeological Field Evaluation* (2014).

The archaeological project manager in charge of the work satisfied herself that all constraints to ground works had been identified, including the siting of live services and Tree Preservation

Orders. A CAT scan was used prior to breaking ground to check for the presence for any buried cables.

The agreed evaluation areas were positioned to maximise the retrieval of archaeological information and to ensure that the archaeological resource was understood. The archaeological evaluation comprised the excavation of four trenches measuring 2m by 4m. The trenches were positioned to provide a wide sample across the main areas of impact within the site and to target potential features.

Topsoil and overburden were removed by hand excavating using hand tools. All excavation was undertaken under direct archaeological supervision, by a suitably experienced and qualified archaeologist. The spoil generated during the evaluation was mounded away from the edges of each trench. Excavation ceased at a maximum depth of 0.30m or the top of archaeological deposits.

All archaeological features and deposits revealed were cleaned and excavated in an archaeologically controlled and stratigraphic manner, in order to establish their extent, form, date, function, and relationship to other features. All features were investigated to understand the full stratigraphic sequence down to 0.30m below ground level. Any excavation was undertaken with a view to avoiding damage to any archaeological features or deposits which appear to be demonstrably worthy of preservation in situ.

There was an understanding of the need to cause the minimum disturbance to the site consistent with adequate evaluation. There was sufficient excavation to give clear evidence for the period, depth and nature of any archaeological deposit. The depth and nature of colluvial or other masking deposits was established across the site.

All identified finds and artefacts were collected and retained and bagged and labelled according to their context. No finds were discarded without assessment by an appropriate finds specialist.

A full written, drawn and photographic record was made of all features revealed during the course of the archaeological evaluation. All archaeological features or deposits encountered were described fully on pro-forma individual context recording sheets, using standard methods of the archaeological contractor appointed. A stratigraphic matrix was compiled to record the relationships of any archaeological features or deposits encountered.

Plans were completed at a scale of 1:20 (as appropriate), with section drawings at a scale of 1:10. All plans were tied in with the Ordnance Survey National Grid with levels given to above OD.

A photographic record, utilising high resolution digital photography of a minimum of 10 megapixels and in RAW format, was maintained during the course of the fieldwork and included:

- the site during work, showing specific stages of fieldwork
- the layout of archaeological features within each trench
- individual features and, where appropriate, their sections
- groups of features where their relationship is important

5. Evaluation results

Trench 1 (Figure 5; Plates 1-3)

Trench 1 was 4m in length and 2m in width orientated NW/SE. Trench 1 was located within the front yard of 38 Craig - y - don (Figure 5). Historic cartographic sources show that this trench is located just outside of the boundary where the old foundry buildings were located. This trench was dug to a maximum depth of 0.30m.

Deposit (1005) was encountered immediately below the topsoil (1001) and was dug to a depth of 0.30m below ground level. It was comprised of a dark-red brown silt deposit with frequent course components of brick, mortar, tiles, and cobbles. This deposit spanned the entire length of the trench. Some ceramic building material was found within. Finds, such as a cigar box, a nail and glass are indicative of the habitation of the area after the smelt works had been demolished.

The topsoil (1001) contained many inclusions of brick, large cobbles, as well as, ceramic, glass, and metal finds that appeared post-medieval in date. The topsoil measured 0.16m in depth and was located above a debris or demolition material (1005).

Trench 2 (Figure 6; Plates 4-7)

Trench 2 was in the front yard of 92 Craig - y - don (Figure 6) orientated NE/SW. This trench was dug to a depth of 0.13m below ground level until a hard surface was reached. The topsoil (1001) consisted of dark brown loam with few inclusions of ceramic and metal finds, all post-medieval in date. A hard surface (1003) was located beneath the topsoil. This surface was not excavated with hand tools as it was too hard for the tools to penetrate, possibly a ceramic deposit as surface texture and colour seem to be that of clay. The surface was mid-brown red in colour and spanned the entire length and width of the 2x4m trench. Some patches of black colouring could be seen on the surface which may have indicated burning in these patches, but this was unclear.

Trench 3 (Figure 7,9; Plate 8-18)

Trench 3 was 4m in length and 2m wide. It was aligned NE/SW and located in the front yard of 94 Craig - y - don estate (Figure 7). The trench was dug to where archaeology was encountered or to a maximum depth of 0.30m.

A surface {1033} (Plates 9,11, 17) was found beneath the topsoil from the middle to the SW end of the trench. This surface was composed of multiple contexts of sandstone or cement and took up most of the trench surface area. Towards the E end of the trench was a deposit of building material that seemed to be the remains of a wall structure. This consisted of brick (1026), stone (1023) (1020) and a mortar (1025) (Plates 16,18). The relationship between the wall remains and the surface structure was not clearly seen in section due to the hardness of the surface to excavate and the truncations of the modern sewer drain. A deposit (1024) (Plates 8,9,10) was found in patches across the entirety of the trench which consisted of a mid-grey brown silt with many cobble and broken brick inclusions. A modern sewerage drain ran along the S edge of the entire trench in an E/W alignment truncating (1024) (Plates 12-16). This drain consisted of a cut [1021], the drain itself (1022) and what seem to be capping stones (1027) (Plate 8). A similar deposit (1036) to that of (1024) was found between the capping stones and the drain (Plates 8, 9,10).

Many finds were found within the topsoil, including two one penny coins with the dates 1917 and 1938 on them. Finds also included a glass bottle, broken fragments from objects made of ceramic, CBM, bone and Iron.

Trench 4 (Figure 8-9; Plate 19-27)

Trench 4 was 4m in length and 2m in width and aligned NNE/SSW located in the front garden in 95 Craig - y - don estate (Figure 8). Surfaces were uncovered at 0.10m below ground level. Two surfaces were uncovered; however, they are most likely the same surface that has been heavily truncated by gardening, creating a circular hollow between the two. The larger surface {1002} was composed of a mixture of cobble (1007) and (1014), brick (1013) (Plate 29) and (1032) (Plate 28), mortar (1015)(1030) and plaster (1028)(1011) (Plate 24 -27). The mix of components of brick and cobbles may possibly be due to repairment of the cobbled floor surface as the patches of brick work seemed to cut the cobbles surface. A possible small pit [1008] may have been cut into the cobble deposit (1007) (Plate 23), however this is more likely a deposit as cut was not clearly seen in section (Figure 9; Plate 24). The fill of this small pit (1009) was similar in consistency to the burnt material found beneath surfaces (1007) and (1031). Brick debris inclusions were found within, but no finds. Along the SSE/SSW edge of the trench is a plaster like deposit (1011) that seems to be on top of the stone deposit (1028) (Plate 26 and 27). A second brick surface {1031} was found along the NNE/SSE edge of the trench. This surface is most likely the same as {1002}, however, no physical relationships were observed between the two surfaces (Plate 23). This surface was composed of brick (1010) and

mortar (1031) in a similar fashion to deposit (1013), however (1013) did not seem to have a similar mortar. Below both surfaces along the NNE/SSE extent of the trench was a deposit of black burnt material (Plate 23). This material was excavated to a maximum depth of 0.30m below ground depth. No finds were recovered from this deposit. This deposit is most likely from the old foundry that was situated on top of the trench area. Finds from the topsoil above this surface included animal bones and broken ceramic dishware most likely from after the residential development of the area. Some bits of glass (one shard with the word 'acid' on it) and iron were recovered from the topsoil as well, which is more likely related to the smelt works buildings.

6. The finds

Several finds were found in the topsoil of all trenches. Trenches 3 and 4 had significantly more finds than that of 1 and 2.

Trench	Context	Finds
Trench 1	(1001)	1x Glass
Trench 1	(1001)	2x Iron, one of which was a rusted nail
Trench 1	(1001)	7x Ceramic
Trench 1	(1001)	1x small metal tobacco box, chevron patterning evoking herringbone, numerous dents and warping of the metal, likely 20th century in origin
Trench 2	(1001)	1x Iron
Trench 2	(1001)	2x Ceramic
Trench 2	(1001)	1x CBM
Trench 3	(1001)	2x Glass
Trench 3	(1001)	3x Iron
Trench 3	(1001)	8x Ceramic
Trench 3	(1001)	9x CBM
Trench 3	(1001)	2x Bone
Trench 3	(1001)	1x Small 50cl-25cl glass bottle likely 20th century in origin
Trench 3	(1001)	2x one pence coins - one dateable from the year 1938 by the inscription below the figure of a seated Britannia adjacent to the denomination 'ONE', obverse head side significantly worn and inscription currently fragmentary – the other consists of a significantly warn seated Britannia, below which can be made out the year

		1917, the other side bearing the head of George V and the inscription '…DEI GRA.BRITT.OMN.REX.FID.DEF…'
Trench 4	(1001)	6x Copper fragments not clearly identifiable as objects
Trench 4	(1001)	4x Glass, one fragment of which contains the word 'acid'
Trench 4	(1001)	2x Iron pieces, not clearly identifiable as objects
Trench 4	(1001)	2x Ceramic
Trench 4	(1001)	2x CBM
Trench 4	(1001)	8x Animal bone
Trench 4	(1001)	1x Shell

7. Discussions and Conclusions

The features found within all the trenches are likely relate to the Mona foundry buildings that once stood where the Craig - y - don estate is now located. The structures found in Trench 2, 3 and 4 are all situated directly below where one of the old foundry buildings is situated according to the 1889 historic map (Figure 2). The surface in Trench 4 shows signs of repair and usage and is composed of various types of material, perhaps signs of repair to the surface. The debris deposit in Trench 3 is also likely remnants of the foundry structure. The old foundry was said to have at least 31 furnaces and tall chimneys therefor the deposit (1006) in Trench 4 and the slag finds within trench fours top soil may be related to the industrial buildings. No evidence of the reported dire of 1893 could be clearly identified. Most finds seem to be from the residential inhabitancy of the area through the construction of the estate after the foundry was demolished.

8. Bibliography

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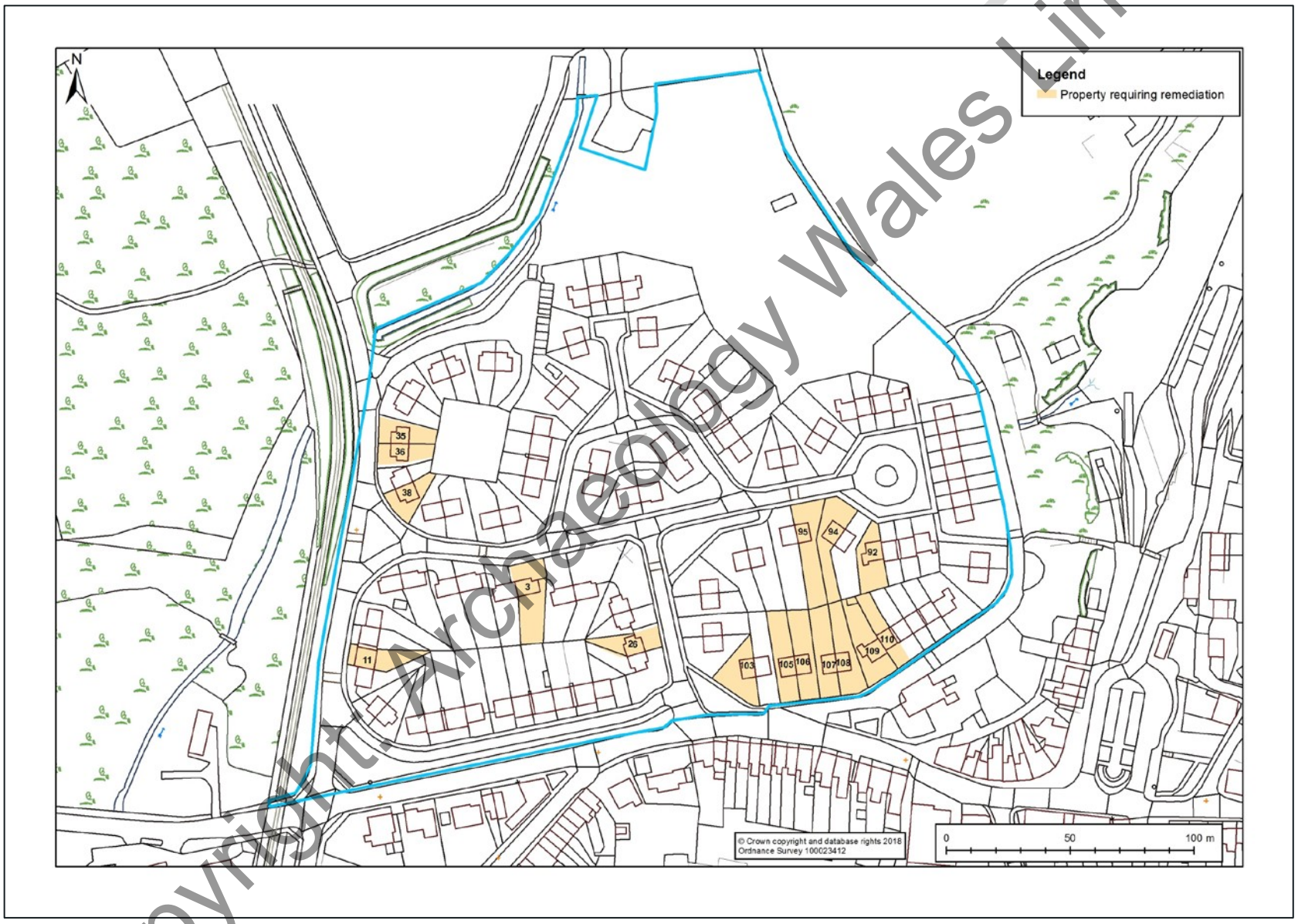
Figure 1.1 Locations of the 16 properties within the study area



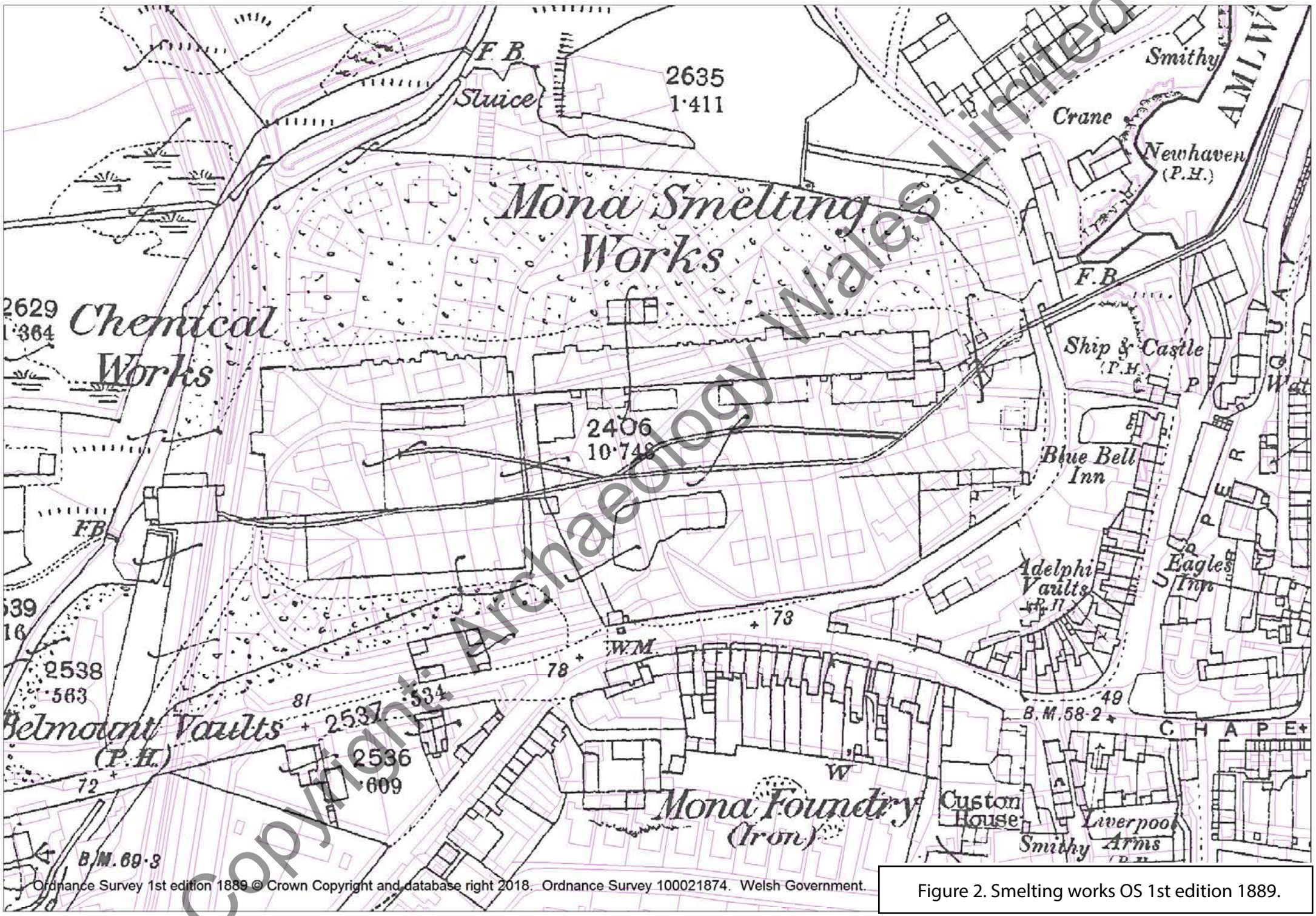
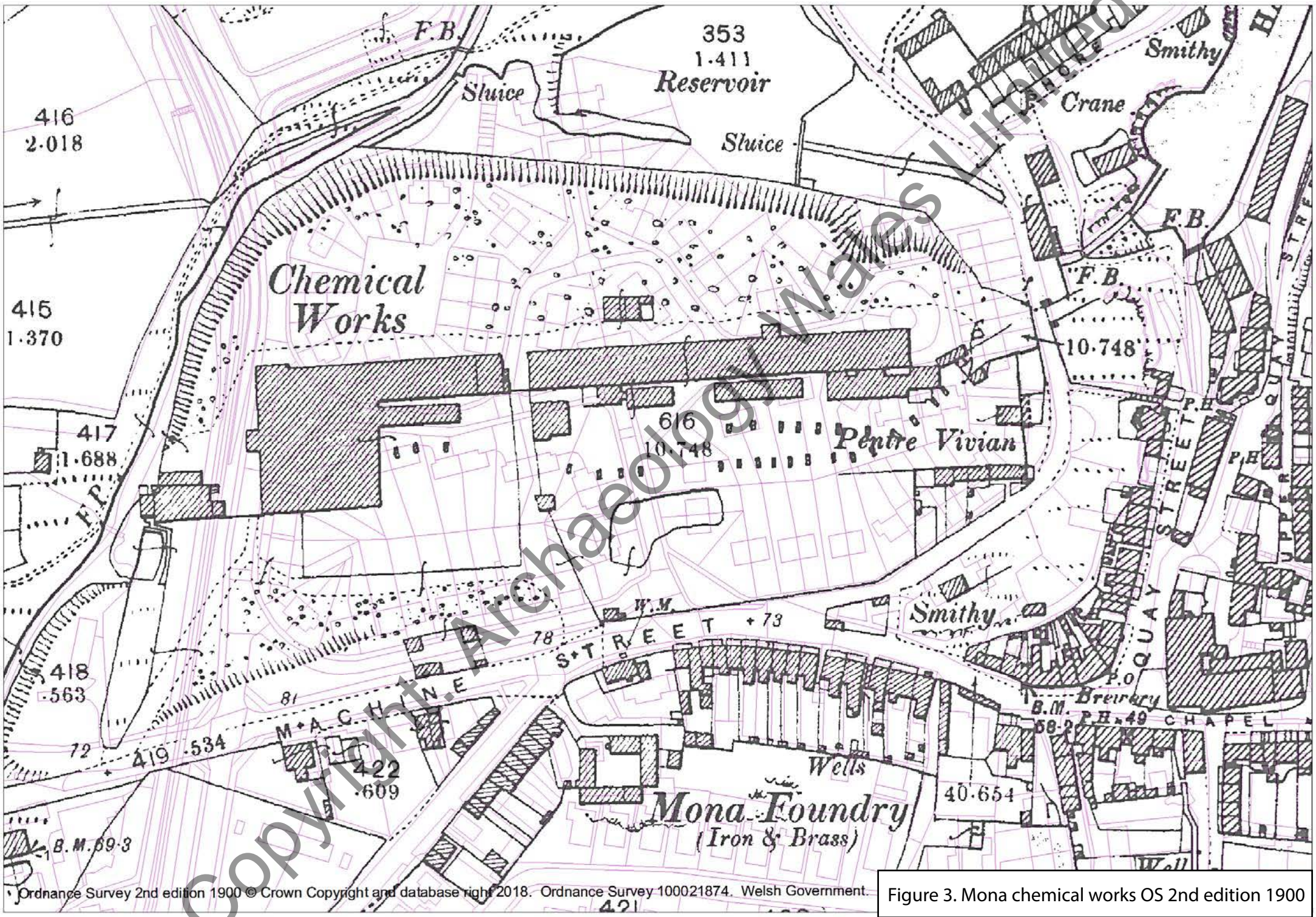


Figure 2. Smelting works OS 1st edition 1889.



Ordnance Survey 2nd edition 1900 © Crown Copyright and database right 2018. Ordnance Survey 100021874. Welsh Government.

Figure 3. Mona chemical works OS 2nd edition 1900

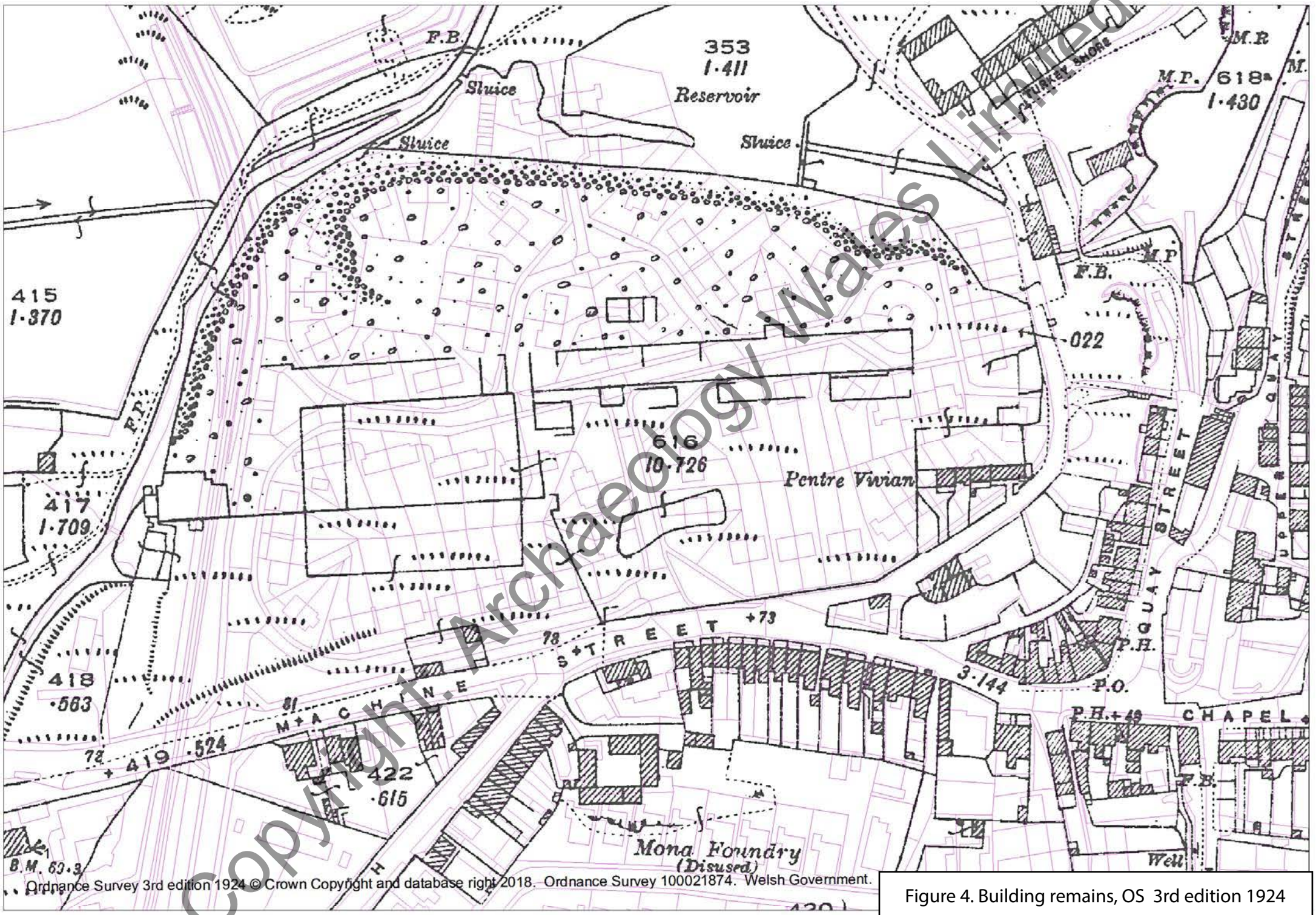


Figure 4. Building remains, OS 3rd edition 1924

Figure 5. Location of Trench 1

Figure 6. Location of Trench 2

Figure 7. Location of Trench 3

Figure 8. Location of Trench 4

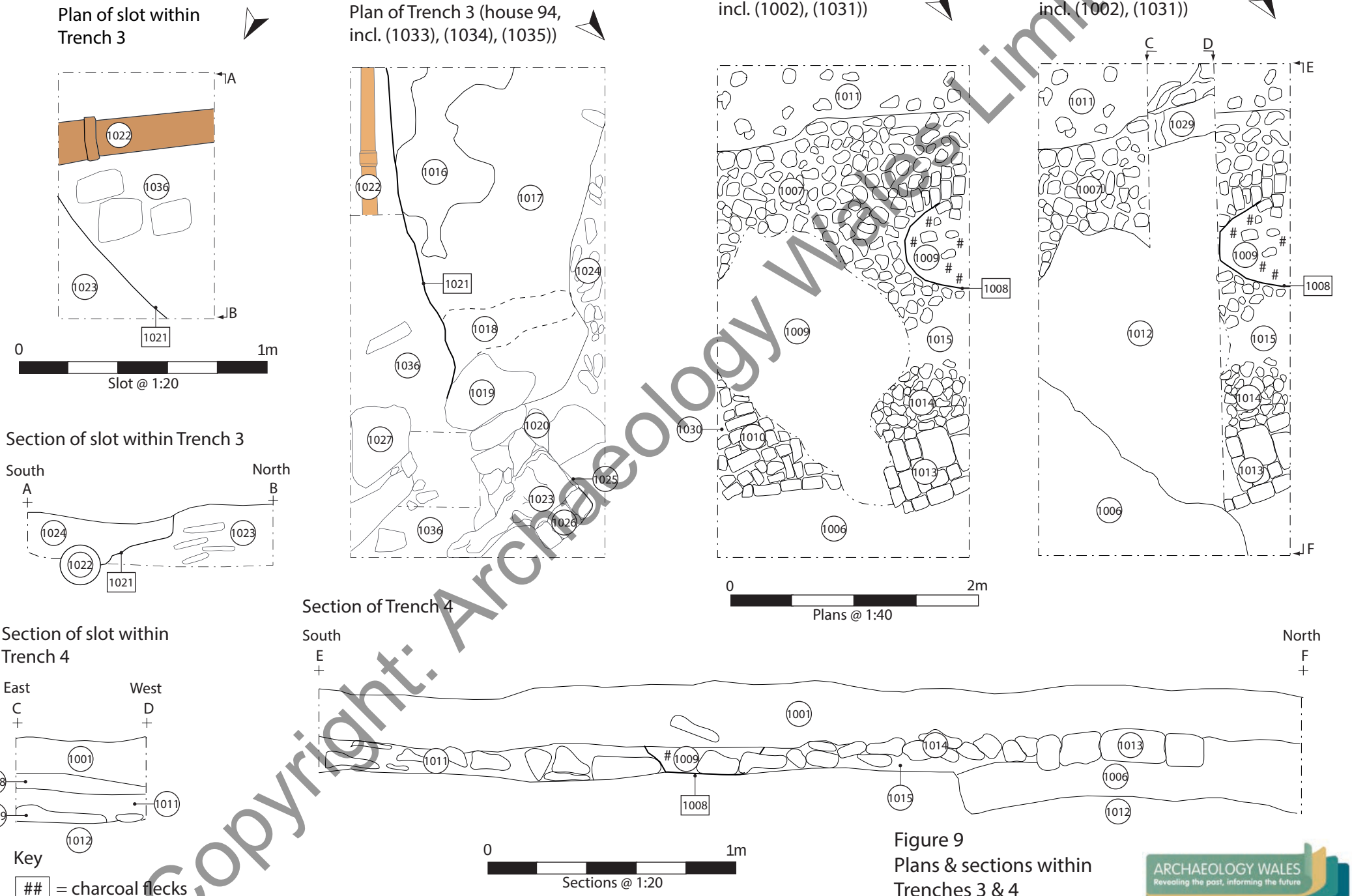


Figure 9
Plans & sections within Trenches 3 & 4

Plate 1. SE facing shot of Trench 1. Scales 1m & 2m

Plate 2. NW facing shot of Trench 1. Scale 2m

Plate 3. E facing shot of Trench 1. Scale 2m

Plate 4. SSW facing shot of Trench 2. Scale 2m

Plate 5. NW facing oblique shot of Trench 2. Scale 2m

Plate 6. NNE facing shot of Trench 2. Scale 2m

Plate 7. NNE facing shot of section in Trench 2. Scale 2m

Plate 8. SW facing shot of Trench 3. Scale 2m

Plate 9. NE section of Trench 3. Scale 2m

Plate 10. N facing oblique shot of Trench 3. Scale 2m

Plate 11. SW facing shot of section in Trench 3. Scale 2m

Plate 12. SE facing shot of Drain (context no.'s 1016-17, 1021,22). Scale 0.5m

Plate 13. SE facing shot of Drain relationship slot (context no.'s 1016-7, 1021-2). Scale 0.5m

Plate 14. SW facing shot of Drain relationship slot (context no.'s 1016-7, 1021-2). Scale 0.5m

Plate 15. NE facing shot of Drain relationship slot (context no.'s 1016-7, 1021-2). Scale 0.5m

Plate 16. SW facing shot of Drain relationship slot (context 1016-7, 1021-2). Scale 2m

Plate 17. SE facing shot of the sandstone surface in Trench 3. Scale 0.5m

Plate 18. SE facing shot of the stone surface in Trench 3. Scale 0.5m

Plate 19. S facing shot of Trench 4 - pre-excavation. Scale 2m

Plate 20. N facing shot of Trench 4 - pre-excavation. Scale 2m

Plate 21. SE facing oblique shot of Trench 4 - pre-excavation. Scale 2m

Plate 22. S facing shot of Trench 4 - post-excavation. Scale 2m

Plate 23. SE facing oblique shot of Trench 4 - post-excavation. Scale 2m

Plate 24. W facing shot of section in Trench 4 - post-excavation. Scale 2m

Plate 25. W facing shot of section in Trench 4 - post-excavation. Scale 2m

Plate 26. E facing shot of stone surface (Group no. 1002). Scale 0.5m

Plate 27. S facing shot of stone surface (Group no. 1002). Scale 0.5m

Plate 28. Plan shot of brick surface (context no. 1032). Scale 0.5m

Plate 29. Plan shot of brick surface (context no. 1010). Scale 0.5m

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Revealing the past, informing the future

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WRITTEN SCHEME OF INVESTIGATION

FOR AN ARCHAEOLOGICAL

EVALUATION

AT

Land adjacent to at Craig Y Don Estate, Amlwch

Prepared for:

Isle of Anglesey County Council

Project No: 2684

December 2018

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Contents **Page**

Summary

This Written Scheme of Investigation (WSI) details a programme of intrusive trial trench evaluation to be undertaken by Archaeology Wales at the request of Isle of Anglesey County Council (IoACC).

The programme of intrusive trial trench evaluation will be undertaken to provide IoACC with information about the archaeological potential of the site prior to commencement of Contaminated Land remediation at Craig Y Don Estate, Amlwch. The site is centred on NGR SH 44751 93225. Four trail trenches will be hand excavated across the site to a maximum depth of 30cm below ground level.

The development area is currently comprised of 112 residential properties. The area is situated on land that had been previously been the Mona Smelting Works. The smelter was built around 1786 and served the copper industry centred on Parys Mountain. Smelting ceased by 1897 but the company continued to manufacture fertilisers until the factory closed around 1910. GAPS reviewed the aerial photographs and map evidence and have suggested that the remains of building foundations and railway structures may survive in the development area.

All work will be undertaken in accordance with the standards and guidelines of the Chartered Institute for Archaeologists (2014).

1. Introduction and planning background

This WSI outlines the details of a programme of intrusive trial trench evaluation will be undertaken to provide the Isle of Anglesey County Council (IoACC) with information about the archaeological potential of the site prior to commencement of Contaminated Land remediation at Craig Y Don Estate, Amlwch. The site is centred on NGR SH 44751 93225 (Figure 1).

Four trail trenches each measuring 2 x 4m will be excavated across the site to a maximum depth of 0.3m below ground level, or less if archaeological deposits are encountered sooner. Following the trial excavations a watching brief is likely be required on the remediation work. The trial trenches will provide more details on this requirement.

This WSI has been prepared by Francesca Ward PCIfA, Archaeology Wales Ltd (henceforth - AW) at the request of IoACC.

The methodology set out in this WSI has been agreed with Gwynedd Archaeological Planning Service (GAPS) in its capacity as archaeological advisors to the IoACC. This programme of works will help informing the requirement and scope of further mitigation measures should they be required.

All work will be undertaken to the standards and guidance set by the Chartered Institute for Archaeologists (2014). AW is a Registered Organisation with the CIfA.

2. Site Description

The development area is currently comprised of 112 residential properties. The area is situated on land that had been previously been the Mona Smelting Works. The site is bounded by residential housing to the immediate south. To the north is the Amlwch sports and social club, a green field area. To the west of the area is a sparsely wooded property. To the east of the development location is Amlwch Port and Amlwch Port windmill is to the northeast of the site.

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GAPS have reviewed the 1889, 1900 and 1924 maps and the 1945 aerial photos. Building foundations as shown on the 1924 overlay survived up until the construction of Craig y Don Estate and it seems highly likely that remains survive at very shallow depths within some of the gardens. The map evidence indicates that structural elements may survive in the rear gardens of Nos. 3, 11 and 26 and in the front gardens of 38, 92, 94 and 95. There is also the possibility that the rear gardens of 92, 94 & 95 may contain the remains of rail infrastructure – whilst the rails appear to have been removed prior to 1900, sleepers are still marked at this point (although not marked on later maps) and some buried evidence of the railway may therefore survive.

4. Objectives

This WSI sets out a program of works to ensure that the intrusive trial trench evaluation will meet the standard required by The Chartered Institute for Archaeologist's *Standard and Guidance for Archaeological Field Evaluation (2014)*.

The objective of the intrusive trial trench evaluation 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 intrusive trial trench evaluation will result in a report that will provide information of sufficient detail, and may result with the definition of further mitigation measures which can safeguard the archaeological resource. 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.

5. Timetable of works

5.1. Fieldwork

The programme of intrusive hand dug trial trench evaluation will be undertaken prior to commencement of Contaminated Land remediation works. The work is proposed to start in December 2018. Archaeology Wales will update with IoACC the exact date. Following the trial excavations a watching brief is likely to be required on the remediation work. Details on this element of the work will be confirmed after the trial trenching phase.

5.2. Report delivery

The report will be submitted to IoACC and to GAPS within three months of the completion of the fieldwork. A copy of the report will also be sent to the regional HER.

6. Fieldwork

6.1. Detail

The work will be undertaken to meet the standard required by *The Chartered Institute for Archaeologist's Standard and Guidance for Archaeological Field Evaluation* (2014).

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 and Tree Preservation Orders.

The agreed evaluation areas will be positioned to maximise the retrieval of archaeological information and to ensure that the archaeological resource is understood. Four trail trenches each measuring 2 x 4m will be excavated across the site to a maximum depth of 0.3m below ground level, or less if archaeological deposits are encountered sooner (Figure 2.1, 2.2, 2.3, 2.4). The first trench will be located in Area B marked on the outline remediation design for 38 Craig y Don (Figure 2.1). The second in Area D marked on the outline remediation design for 92 Craig y Don (Figure 2.2). The third trench will be located in Area C marked on the outline remediation design for 94 Craig y Don (Figure 2.3). The final trench will be located in Area F marked on the outline remediation design for 95 Craig y Don (Figure 2.4). 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 depth at which this mitigation is employed might be deeper if ground works require

excavation below the 0.3m limit. The locations and dimensions of the trenches will be agreed with GGAPs prior to the commencement of works.

The scheme of remediation for each of the properties will involve a combination of removal and replacement of exposed soft surfaced areas up to 300 – 600mm depth (dependant on location) and installation of driveways/paths/patios or other hard standings with minimal excavation to provide the necessary footings.

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.

Where potentially significant archaeological features are encountered during the course of the evaluation then GAPS and the client will be informed at the earliest possible opportunity. GAPS may subsequently request that further archaeological work is undertaken in order to fully evaluate areas of significant archaeological activity. Such work may require the provision of additional time and resources to complete the archaeological investigation.

Following the trial excavations a watching brief is likely to be required on the remediation work.

6.2. 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.

Photographs will be taken in digital format with an appropriate scale, using a 12MP camera with photographs stored in Tiff format.

6.3. Finds

The professional standards set in the Chartered Institute for Archaeologists' *Standard and guidance for the collection, documentation, conservation and research of archaeological (2014)* will form the basis of finds collection, processing and recording.

All manner of finds regardless of category and date will be retained.

Finds recovered that are regarded as Treasure under *The Treasure Act 1996* will be reported to HM Coroner for the local area.

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

6.4. Environmental sampling strategy

Deposits with a significant potential for the preservation of palaeoenvironmental material will be sampled, by means of the most appropriate method (bulk, column etc). Where sampling will provide a significant contribution to the understanding of the site AW will draw up a site-specific sampling strategy alongside a specialist environmental archaeologist. All environmental sampling and recording and will follow English Heritage's *Guidelines for Environmental Archaeology* (2nd Edition 2011).

6.5. Human remains

In the event that human remains are encountered, their nature and extent will be established and the coroner informed. All human remains will be left *in situ* and protected during backfilling. Where preservation *in situ* is not possible the human remains will be fully recorded and removed under conditions that comply with all current legislation and include acquisition of licenses and provision for reburial following all analytical work. Human remains will be excavated in accordance with the Chartered Institute for Archaeologist's *Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains: Technical Paper Number 13* (1993).

6.6. Specialist advisers

In the event of certain finds, features or sites being discovered, AW will seek specialist opinion and advice. A list of specialists is given in the table below although this list is not exhaustive.

Artefact type	Specialist
Flint	Kate Pitt (Archaeology Wales)
Animal bone	Richard Madgwick (Cardiff University)
CBM, heat affected clay, Daub etc.	Rachael Hall (APS)
Clay pipe	Hilary Major (Freelance)
Glass	Rowena Hart (Archaeology Wales)
Cremated and non-cremated	Malin Holst (University of York)/Richard Madgwick

human bone	(Cardiff University)
Metalwork	Kevin Leahy (University of Leicester)/ Quita Mold (Freelance)
Metal work and metallurgical residues	Dr Tim Young (GeoArch)
Neo/BA pottery	Dr Alex Gibson (Bradford University)
IA/Roman pottery	Jane Timby (Freelance)
Roman Pottery	Rowena Hart (Archaeology Wales)/ Peter Webster (Freelance)
Post Roman pottery	Stephen Clarke (Monmouthshire Archaeology)
Charcoal (wood ID)	John Carrot (Freelance)
Waterlogged wood	Nigel Nayling (University of Wales – Lampeter)
Molluscs and pollen	Dr James Rackham
Charred and waterlogged plant remains	Wendy Carruthers (Freelance)

6.6.1. Specialist reports

Specialist finds and palaeoenvironmental reports will be written by AW specialists, or sub-contracted to external specialists when required.

7. Monitoring

GAPS will be contacted approximately five days prior to the commencement of archaeological site works, and subsequently once the work is underway.

Any changes to the WSI that AW may wish to make after approval will be communicated to GAPS for approval on behalf of Planning Authority.

Representatives of GAPS 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 GAPS has had the opportunity to inspect it, unless permission has been given in advance. GAPS will be kept regularly informed about developments, both during the site works and subsequently during post-excavation.

8. Post-fieldwork programme

8.1. Archive assessment

8.1.1. Site archive

An ordered and integrated site archive will be prepared in accordance with: Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2006) upon completion of the project.

The site archive (including artefacts and samples) will be prepared in accordance with the National Monuments Record (Wales) agreed structure and deposited with an appropriate receiving organisation, in compliance with CIfA Guidelines (*Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives'*, 2014). The legal landowners consent will be gained for deposition of finds.

8.1.2. Analysis

Following a rapid review of the potential of the site archive, a programme of analysis and reporting will be undertaken. This will result in the following inclusions in the final report:

- Non-technical summary in Welsh and English
- Location plan showing the area/s covered by the evaluation, all artefacts, structures and features found
- Plan and section drawings (if features are encountered) with ground level, ordnance datum and vertical and horizontal scales.
- Written description and interpretation of all deposits identified, including their character, function, potential dating and relationship to adjacent features. Specialist descriptions and illustrations of all artefacts and soil samples will be included as appropriate.
- An indication of the potential of archaeological deposits which have not been disturbed by the development
- A discussion of the local, regional and national context of the remains by means of reviewing published reports, unpublished reports, historical maps, documents from local archives and the regional HER as appropriate.
- A detailed archive list at the rear listing all contexts recorded, all samples finds and find types, drawings and photographs taken. This will include a statement of the intent to deposit, and location of deposition, of the archive.

8.2. Reports and archive deposition

8.2.1. Report to client

Copies of all reports associated with the intrusive trial trench evaluation, together with inclusion of supporting evidence in appendices as appropriate, including photographs and illustrations, will be submitted to the client and GAPS upon completion.

8.2.2. Additional reports

After an appropriate period has elapsed, copies of all reports will be deposited with the relevant county Historical Environment Record, the National Monuments Record and, if appropriate, CADW.

8.2.3. Summary reports for publication

Short archaeological reports will be submitted for publication in relevant journals; as a minimum, a report will be submitted to the annual publication of the regional CBA group or equivalent journal.

8.2.4. Notification of important remains

Where it is considered that remains have been revealed that may satisfy the criteria for statutory protection, AW will submit preliminary notification of the remains to CADW.

8.2.5. Archive deposition

The final archive (site and research) will, whenever appropriate, be deposited with a suitable receiving institution, usually the relevant Local Authority museums service. Arrangements will be made with the receiving institution before work starts.

Although there may be a period during which client confidentiality will need to be maintained, copies of all reports and the final archive will be deposited no later than six months after completion of the work.

Wherever the archive is deposited, this information will be relayed to the HER. A summary of the contents of the archive will be supplied to GAT HER.

8.2.6. Finds deposition

The finds, including artefacts and ecofacts, excepting those which may be subject to the Treasure Act, will be deposited with the same institution, subject to the agreement of the legal land owners.

9. Staff

The project will be managed by Rowena Hart MCIfA (AW) and the fieldwork undertaken by suitable experienced and qualified members of Archaeology Wales. The IoACC require the work undertaken during week commencing 17 December 2019.

Additional Considerations

10. Health and Safety

10.1. Risk assessment

Prior to the commencement of work AW will carry out and produce a formal Health and Safety Risk Assessment in accordance with *The Management of Health and Safety Regulations* 1992. A copy of the risk assessment will be kept on site and be available for

inspection on request. A copy will be sent to the client (or their agent as necessary) for their information. All members of AW staff will adhere to the content of this document.

10.2. Other guidelines

AW will adhere to best practice with regard to Health and Safety in Archaeology as set out in the FAME (Federation of Archaeological Managers and Employers) health and safety manual *Health and Safety in Field Archaeology (2002)*.

11. Community Engagement and Outreach

AW will undertake a community engagement, which will involve a day drop in session at the Town Hall, to inform the local community and any interested parties of the results of the site investigation work. The date of this event is to be confirmed with the client. This may occur during the site investigation work or following completion of the work. The form of other potential outreach activities may include lectures and talks to local groups, interested parties and persons, information boards, flyers and other forms of communication (social media and websites), and press releases to local and national media. The form of any outreach will respect client confidentiality or contractual agreements. As a rule, outreach will be proportional to the size of the project.

Where outreach activities have a cost implication these will need to be negotiated in advance and in accordance with the nature of the desired response and learning outcomes.

12. Insurance

AW is fully insured for this type of work and holds Insurance with Aviva Insurance Ltd and Hiscox Insurance Company Limited through Towergate Insurance. Full details of these and other relevant policies can be supplied on request.

13. Quality Control

13.1. Professional standards

AW works to the standards and guidance provided by the *Chartered Institute for Archaeologists*. AW fully recognise and endorse the Chartered Institute for Archaeologists' *Code of Conduct*, *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* and the *Standard and Guidance for archaeological watching briefs* currently in force. All employees of AW, whether corporate members of the Chartered Institute for Archaeologists or not, are expected to adhere to these Codes and Standards during their employment.

13.2. Project tracking

The designated AW manager will monitor all projects in order to ensure that agreed targets are met without reduction in quality of service.

14. Arbitration

Disputes or differences arising in relation to this work shall be referred for a decision in accordance with the Rules of the Chartered Institute of Arbitrators' *Arbitration Scheme for the Institute for Archaeologists* applying at the date of the agreement.

15. References

Chartered Institute for Archaeologists, 2014. Standards and guidance for the collection, compilation, transfer and deposition of archaeological archives.

Chartered Institute for Archaeologists, 2014. Standards and guidance for the collection, documentation, conservation and research of archaeological materials.

Chartered Institute for Archaeologists, 2014, Standard and Guidance for Archaeological Field Evaluation. Chartered Institute for Archaeologists.

English Heritage, 2002. Guidelines for Environmental Archaeology.

English Heritage, 2006. Management Of Research Projects in the Historic Environment (MORPHE).

McKinley, J., Roberts C., 1993, Excavation and post-excavation treatment of cremated and inhumed human remains, Technical Paper 13.

British Geological Survey: Geology of Britain viewer:

www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

Figure 1.1 Locations of the 16 properties within the study area

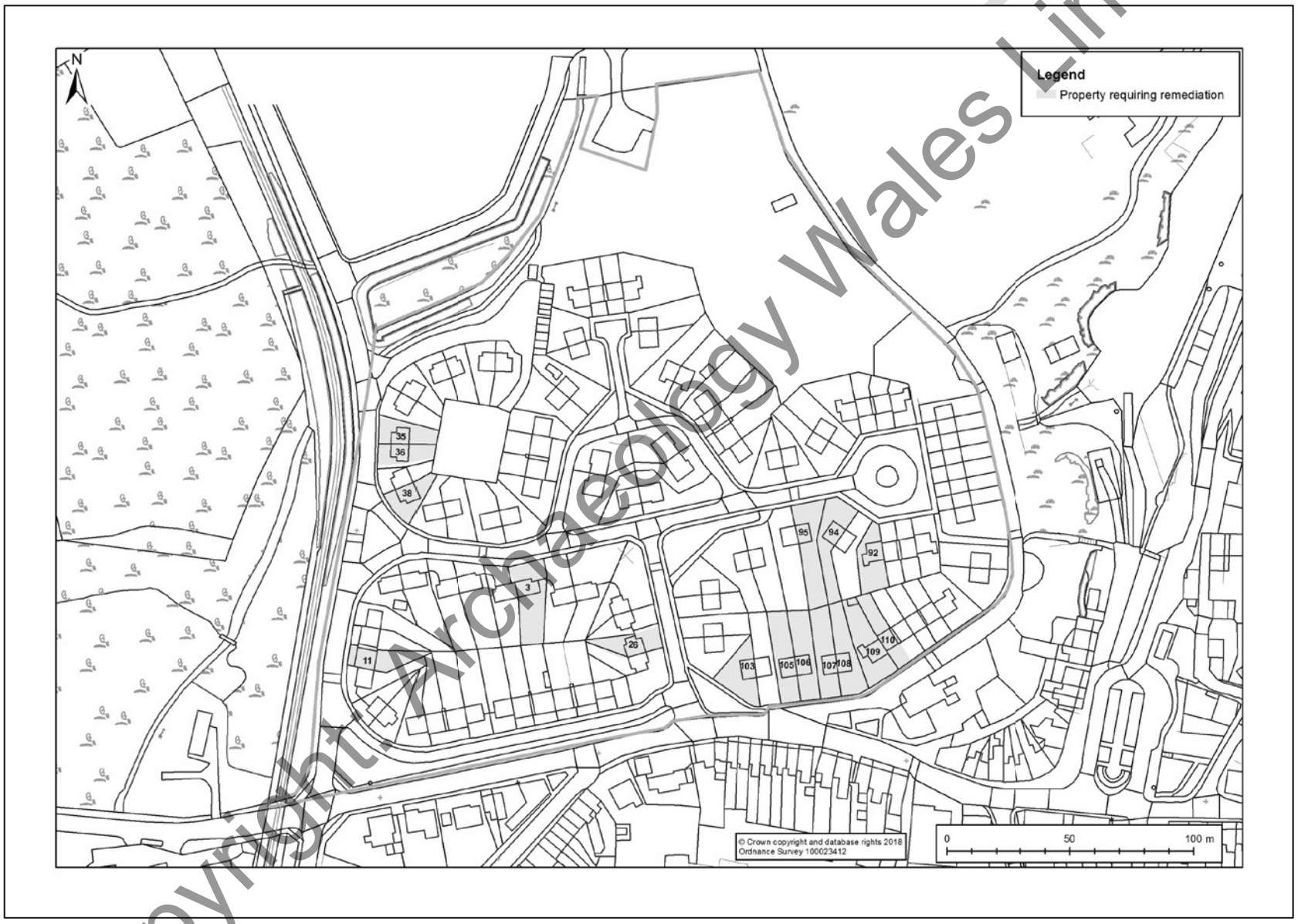

Figure 2.1 Outline remediation design – 38 Craig Y Don

Figure 2.2 Outline remediation design – 92 Craig Y Don

Figure 2.3 Outline remediation design – 94 Craig Y Don

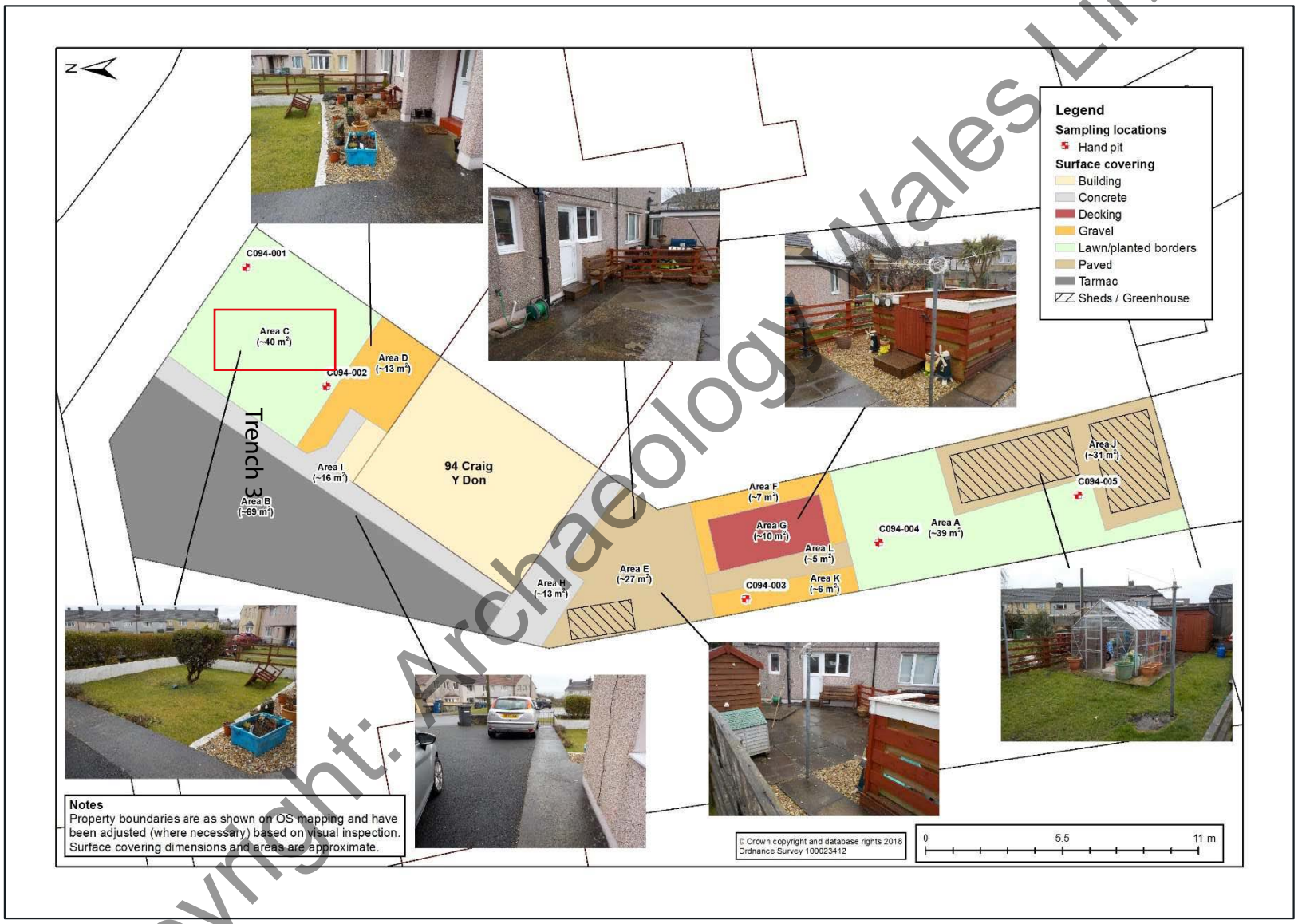

Figure 2.4 Outline remediation design – 95 Craig Y Don