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Engineering Archaeological Services Ltd.

Ysgol Treferthyr, Criccieth
Archaeological Watching Brief

I.P. Brooks

EAS Client report 2024/17

Ysgol Treferthyr, Criccieth
Watching Brief

Commissioned
by
Alan Edwards
Property Development Officer,
Housing and Property Department
Gwynedd Council

Report
by

I.P. Brooks
Engineering Archaeological Services Ltd.

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registered in England

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Introduction

NGR: Centred on SH 49254 38055

Event PRN: 49290

Location and Topography: (Figure 1)

The site of the new school for Criccieth lies at the western edge of the built-up area of Criccieth, Gwynedd. It is south of the A497, west of Lon Fel and north of the railway. The eastern side of the development area is under semi-mature woodland and is fenced off as a separate plot. West of the woodland the land had the appearance of parkland with a series of mature oaks within a pasture. The oaks concentrated along the western side of the development, partly along a drainage channel or seasonal stream. In the south west corner of the development area was an area of reedy vegetation suggesting this part of the field was waterlogged at times of the year.

Near to the southern boundary is a single standing stone. Aeon Archaeology (Cooke 2019, 28) records this stone as having apparent drill marks on its eastern face suggesting it is a relatively modern feature. The drill marks, however, could not be located during the current works. Also, the excavation at the base of the stone (Brooks 2022, 18) suggests that the hole dug to contain the base of the stone (Context 93) was sealed by the material of the track (Context 88) leaving the possibility that this may be a prehistoric feature. This hole also did not contain any post-medieval material culture.

In general, the ground sloped gently down to the south, but with the occasional diffuse earthworks which are assumed to be natural. The north western corner of the development area, however, appeared to form a flattish platform, approximately 80 x 40 m in size, with a short, steeper, slope down to the south.

The majority of the plot had been stripped under archaeological monitoring and the archaeology recorded as part of the evaluation carried out in 2022 (Brooks and Jones 2022). The current watching brief covered the areas outside that stripped in 2022, particularly the area of the construction compound, the area of the pond in the south-western corner of the development, the new haul roads around the development and the area between the area stripped in 2022 and the southern boundary of the site. It was also possible to observe the trench dug in the A497 to link the on-site services to the local network.

Archaeological Background

Gwynedd County Council have built a new school on the site (Planning Reference C21/0718/41/LL). Previously they commissioned Aeon Archaeology (Cooke 2019) to produce a desktop study of the proposed development which looked at a larger area including a second field immediately to the west of the survey area. The study defined a number of potential archaeological features within the development area including fifteen archaeological sites within, or in close proximity to the site boundary. Of particular note is the former driveway to Muriau (PRN: 81364) which crosses the survey area from south to north. Also, the 1839 Tithe Map suggests a serpentine water course crosses the development area as does a series of field boundaries which are also shown on 1831 Ordnance Survey map.

This was followed by a Fluxgate Gradiometer survey of 1.13 Ha of the proposed development area (Brooks 2020) which suggested the presence of a number of anomalies which could be result of archaeological activity (Event PRN 46245). The majority of the anomalies appeared to relate to the either modern disturbance or the parkland landscape, however, the drive to Muriau was located and a group of anomalies in the north east section of the survey suggested a level of archaeological activity not recorded in the desk-top study.

In his response to the Gwynedd Planning Committee, Tom Fildes (Planning archaeologist at the Gwynedd Archaeological Planning Service) stated that "the periphery of the town does hold potential for unknown archaeological sites. The Tithe Map suggests early variations on the field's composition, as well as being in proximity to an early (possibly even Medieval) farmstead to the south. The route of the A497 is the route of the original track in and out of Criccieth to the west, meaning that roadside sites such as this hold particular potential for associated activity." (https://amg.gwynedd.llyw.cymru/planning/index.html?fa=getApplication&id=32054).

An archaeological evaluation (Event PRN 46257) took place between 21st March and 1st April 2022 which involved the digging of a total of 22 trenches, each approximately 30 x 1.8 m in size (Brooks and Jones 2022). Seven of the trenches contained no archaeologically significant features or deposits. The other trenches contained evidence for previous land divisions, probably related to those seen on the 1839 Tithe Map for Criccieth, the previous line of the drainage channel and the track from Muriau. Most surprisingly, at least one, probable, prehistoric, cist, and, what was then thought to be, part of a possible second cist, was located in Trench 12.

As a result of the evaluation Tom Fildes recommended an excavation of the area within the development where there was going to be significant disturbance or reduction of the levels. This was commissioned by Alan Edwards, Property Development Officer, Housing and Property Department of Gwynedd Council with the fieldwork taking place between 3rd and 21st October 2022 (Brooks 2022). An area of approximately 0.62 Ha were stripped, in one block, revealing the line of a boundary, a probable, post-medieval building platform and further details of the possible cist revealed in the previous evaluation. An area of approximately 100 m^2 was also stripped around the standing stone to investigate the relationship between the stone itself and the track from Muriau.

A final stage of archaeological investigation was commissioned to carry out an archaeological watching brief on the works carried out during the construction of the new school. This included some areas that were outside the footprint of the new school buildings not investigated at an earlier stage in the development.

Aims of the Watching Brief

To record any archaeological feature or significant deposit revealed by the construction phase of the new school

SUMMARY

Engineering Archaeological Services Ltd were commissioned by the Housing and Property Department of Gwynedd Council to carry out an archaeological watching brief on the construction phase of the new Ysgol Treferthyr, Criccieth, Gwynedd. Only limited extra archaeology was located including a series of earth-bound boulders which marked, within the construction compound, a possible field boundary and a burnt mound. The track which originally led to Muriau was also traced across the. An opportunity was also taken to cut a section across the boundary (Context 96) recorded in the previous excavation.

The fieldwork took place between 22/022023 and 18/09/2023.

Comisiynwyd Engineering Archaeological Services Ltd gan Adran Tai ac Eiddo Cyngor Gwynedd i gynnal briff gwylio archaeolegol dros gyfnod adeiladu Ysgol Treferthyr newydd, Cricieth, Gwynedd. Ni ddarganfuwyd llawer o olion archaeolegol ychwanegol. Roedd y rhain yn cynnwys cyfres o greigiau wedi'u clymu â phridd a oedd yn nodi, o fewn y compownd adeiladu, ffin cae bosibl a thwmpath llosg. Cafodd y llwybr a arweiniodd yn wreiddiol at Muriau ei olrhain ar draws y safle hefyd. Manteisiwyd ar gyfle hefyd i dorri darn ar draws y ffin (Cyd-destun 96) a gofnodwyd yn y cloddiad blaenorol.

Cynhaliwyd y gwaith maes rhwng 22/02/2023 a 18/09/2023.

Methodology

Any stripping of topsoil and associated deposits was monitored by a suitably qualified archaeologist. The work included monitoring the groundworks associated with the construction compound, before the main works took place, the construction of a haul road around the site, any excavation or topsoil stripping associated with the construction of the new school or any associated facilities and the digging of a new service trench within the A497. A new section was also dug, by machine, across the field boundary (Context 96) recorded in the previous phase of work.

Any features located were recorded with a written, drawn and photographic record being kept. Photographs were taken with a Nikon V5 Digital Camera at a resolution of 24.2 MP with the photographs recorded in RAW format, which was converted to .TIFF for the archive. Photogrammetric plans of the archaeological features were produced using a Akaso Brave 6 Plus camera, mounted on an extendable pole, at a resolution of 20 MP which were further processed with Agisoft Metashape Standard v. 2.0.2.

The fieldwork took place between 22/02/2023 and 18/09/2023.

Results

Relatively little extra archaeology was located in the watching brief held during the construction of the new school. However, limited new archaeology was located, particularly in the construction compound, along the northern edge of the development site and below the tarmac of the A497.

Possible field boundary

During the topsoiling of the construction compound a line of at least sixteen earth-fast stones were located crossing the site in an east – west direction (Context 97) (Figure 3, Plate 1). The majority of the boulders used for this feature were up to 500 x 300 mm in size, although, more generally, they were 300 x 200 mm in size. The line is a bit intermittent in places.

This feature is similar in character to the boundary, Context 96, which was recorded during the excavation, however it is on a different alignment and is not a continuation of the previously recorded boundary. The Tithe Map, drawn in 1839, does not show a boundary in this part of the field presumably suggesting this boundary may predate the Tithe Map.

Track crossing the site

The track originally leading to Muriau (GAT PRN: 81364) was recorded in both the evaluation (Brooks and Jones 2022) and the excavation (Brooks 2022). Further sections were observed, particularly near to the construction compound (Plate 2) and in the area immediately north of the standing stone (Plate 3). The trackway ran in a straight line across the site from near to the standing stone, north, to the original gateway to the field. Whilst it was, generally, buried at a relatively shallow depth; within the area near to the south western corner of the new school building it was buried by a dump of redeposited soil up to 450 mm thick. The origin of this deposit is unknown, but it is possible that it relates to the construction of the railway in 1867 (Gwyn, 2006, 212). Near to the gateway at the northern end of the trackway it was possible that the track was marked by a series of large boulders 900 x 600 x 300 mm in size placed along its western side (Context 98, Figure 3).

Section through the field boundary

An opportunity was given by Aled Roberts, of Wynne Construction, for the use of a machine and driver to cut a section across the field boundary recorded in the previous phases of archaeological activity. An eight-metre-long trench, one bucket wide, was cut across the line of Context 99 with a machine using a smooth faced ditching bucket (Plates 4 and 5, Figure 4).

This showed the boundary to have been a stone-faced bank (Context 100) with a ditch to the south (Context 102) This ditch was probably recut (Context 103), although the relationship between these two features is not entirely clear; as both of the cuts were filled with the same deposit (Context 101). To the south of the ditches there was a scatter of tumbled stones and hill-wash which is probably derived from later ploughing over the disused boundary.

The northern side of the bank (Context 99) was ill defined, possibly suggesting that the bank only had a stone face to the south and that the bank had been spread by later phases of agricultural activity.

Burnt mound

The construction of a second, temporary, haul road along the northern boundary of the site, to the east of the telegraph pole revealed a probable burnt mound. Below 280 mm of topsoil and 200 mm of mid brown clayey silt subsoil was a spread of black silty clay (Context 105), with frequent, small to medium, fire cracked stone, moderate chunks of charcoal and flakes of charcoal throughout. The stone was stained and heat coloured black and red. The context

was between 180 to 230 mm deep and 4m wide by at least 3m. Context (105) spread under the sections of the excavations in the north. This area was very wet and running with water even though it was at one of the highest points of the development. Below the burnt mound the underlying subsoil was baked/burnt in some places (Context 106). A sample from Context (105) was submitted to the ^{14}CHRONO Centre at Queens University, Belfast which returned a date of cal BC 1111- 930 (at 95.4% level of confidence) (UBA-57672).

In the road

The excavation of a trench within the A497, in order to link the services for the school to the existing supplies within the road, allowed the observation of an area outside the development. It was not safe to enter the trench; thus, it was recorded from observations from the top of the trench and a composite, rectified image of the two lengths of the trench. Below at least two layers of tarmac (Contexts 107 and 108) was a layer of orange-brown gravel which probably acted as a sub-base to the tarmac road (Context 109). Below this was a layer of rounded and sub-rounded boulders up to 0.4 m in size (Context 110) which is thought to be a possible foundation for an earlier road. These are assumed to be fragments of an earlier version of the road surviving as make-up layers.

Context 110 partly sat on a layer of mid brown clayey soil (Context 111) up to 250 mm thick which may have been a turf layer, before the road was constructed. This layer merged with the fill of a cut feature (cut 112, fill 113). The extent and plan of this feature is unknown, although it is possible that it was a wide (1.43 m), shallow (0.33 m) ditch or pit.

Context 112, cut a layer of mottled yellow and yellowish-brown clayey silt (Context 118) which sat on a thin layer (50 mm) of pale grey clayey soil (Context 119). The pale colour of this layer suggest it has been leached and therefore has had water passing through the layer.

There were also two, other, features cut into the natural gravels, below Context 110. Context 114 (filled with Context 115) was 1.31 m wide and 0.36 m deep with moderately sloping sides and a flat base, whilst Context 116 was 1.0 m wide and 0.44 m deep with sloping sides and a rounded base

Conclusions

There was, surprisingly, little extra archaeology recorded from the watching brief, particularly from within the development site. The track from Muriau was confirmed to run from near to the standing stone to the gate into the field. This track must predate the construction of the railway in 1867 (Gwyn, 2006, 212) as the railway cuts the line of the track off from the house and its access to the road, later to become the A497. The layer of soil sealing the mid-section of the track may well be related to this phase of activity with excess spoil from the construction of the railway being dumped in this field. At some places it is possible that the track was defined by large stone boulders placed along the edges of the track.

In the north west corner of the development (within the construction compound) another possible field boundary (Context 97) was located. Unlike the boundary recorded in the previous excavation (Context 96) this cannot be related to the Tithe Map and therefore probably predates the 1840's. The section through the previously defined boundary proved it

to be slightly more complex than previously thought. It consisted of a stone fronted, earthen bank with a ditch on its downhill side. This ditch was recut at some point in its history.

The only new feature located, within the development area, not located by the previous work is the "burnt mound" (Context 105) on the northern boundary of the development. This feature clearly extended below the retaining wall of the A497 and its full extent is not known. It is somewhat curious that the burnt mound was sited at what is the highest point of the field, as, more usually, access to water appears to be the main factor in the siting of these features (Kenney 2012, 262). The deposit, however, was extremely wet when excavated possibly suggesting a local source of water, somewhere under the current road. Burnt mounds are generally assumed to be Bronze Age features, but examples have been recorded from the Early Neolithic to the Early Bronze Age (Kenney 2012, 265). In North Wales, however, the main phase of construction of burnt mounds dates from 2500 cal. BC to 800 cal BC (Kenney 2012, 266). This would correspond with the C^{14} date obtained from Context (105) which is at the more modern end of the range of dates with a at 95.4% chance of being between 1111-930 cal BC (UBA-57672).

The new trench for services cut into the A497 suggests, not only a development of the road itself, but also a level of archaeological activity not seen on the rest of the site. Below the two layers of modern tarmac, there appears to be the remnants of an earlier road, consisting of a series of stone boulders. It is assumed this is only the basal layers of the road and there would have been a gravel surface which has been lost. Below this were a series of archaeological features and contexts suggesting level of activity before the road was laid out and constructed. Unfortunately, nothing datable was recovered from these features and their potential relationship to the burnt mound (Context 105), approximately 50 m to west cannot be established.

Acknowledgements

The evaluation was commissioned by Alan Edwards, Swyddog Datblygu Eiddo, Adran Tai ac Eiddo, Cyngor Gwynedd. The main contractor for the site was Wynne Construction with Aled Roberts as the Site Manager, his support throughout the project was much appreciated. The burnt mound was excavated and recorded by M. Jones of CR Archaeology. The project was monitored for the Gwynedd Archaeological Planning Service by T. Fildes.

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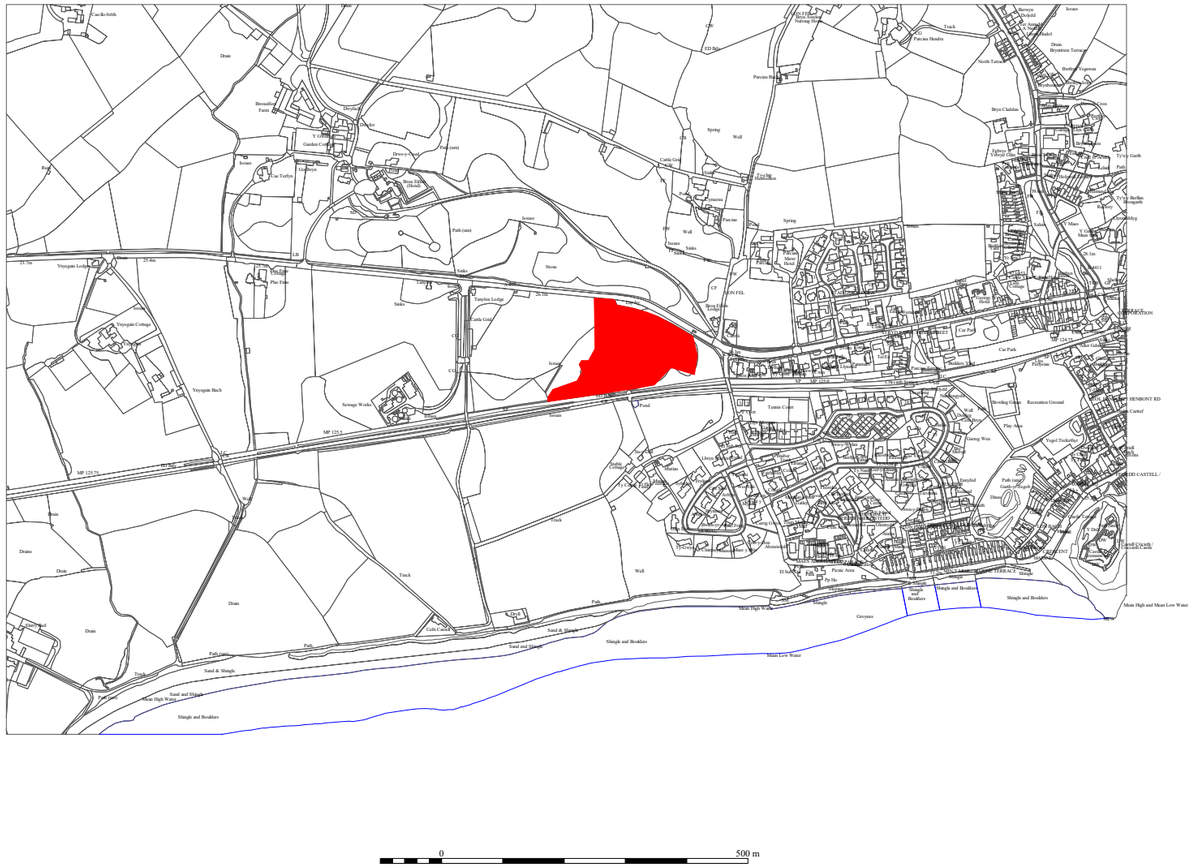


Figure 1: Location
Scale 1:10,000

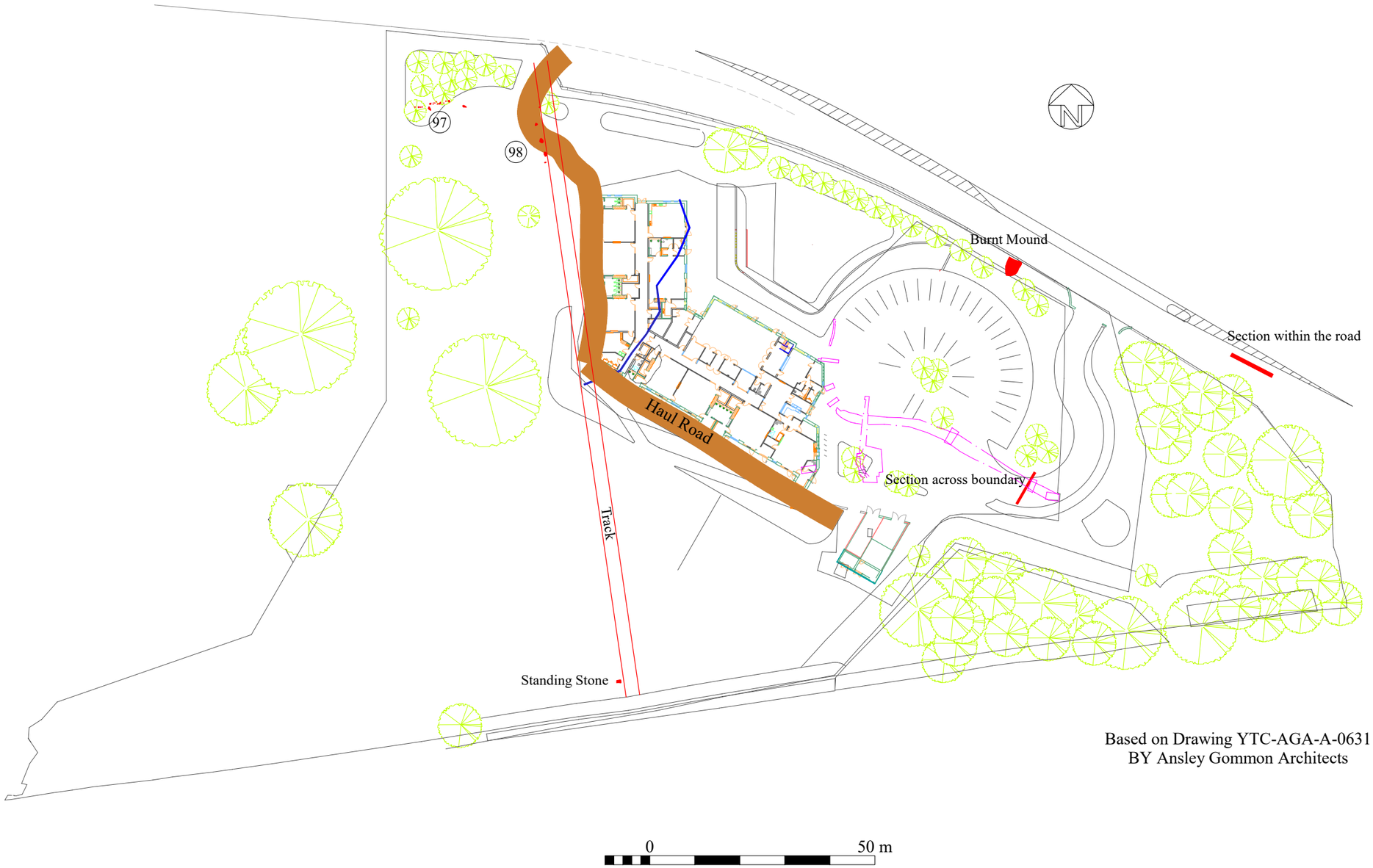


Figure 2: Location of the Archaeology Recorded
Scale 1:1,000

Figure 3: Location of the Archaeology in the Construction Compound
Scale 1: 150

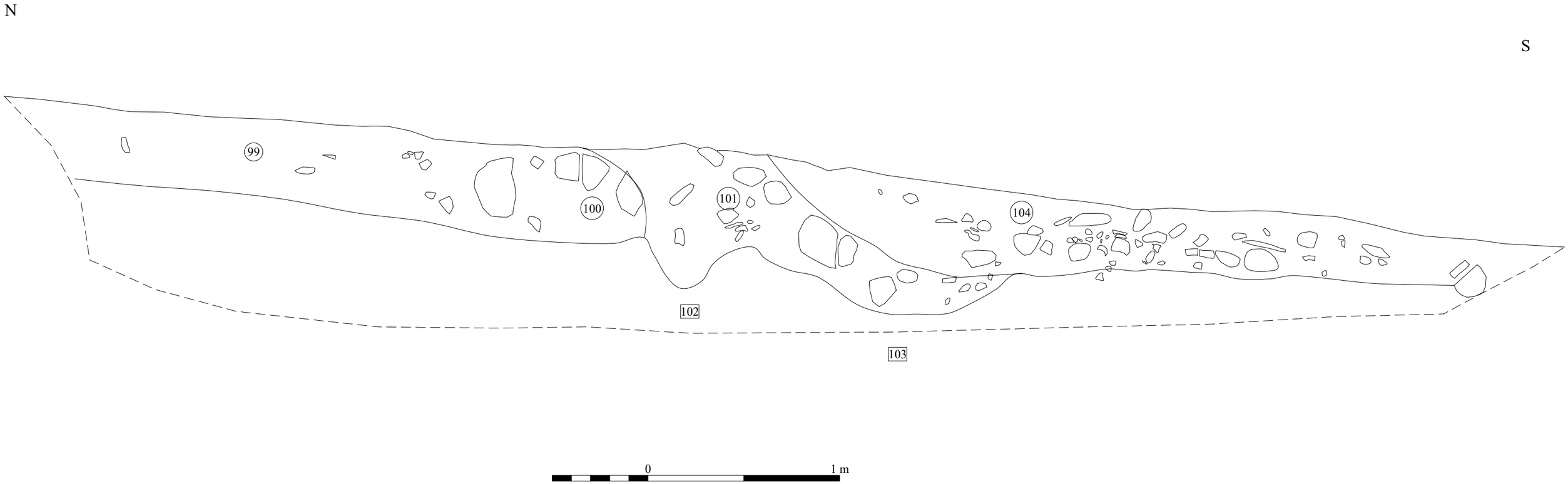


Figure 4: Section Through the Field Boundary (Context 97)
Scale 1:20

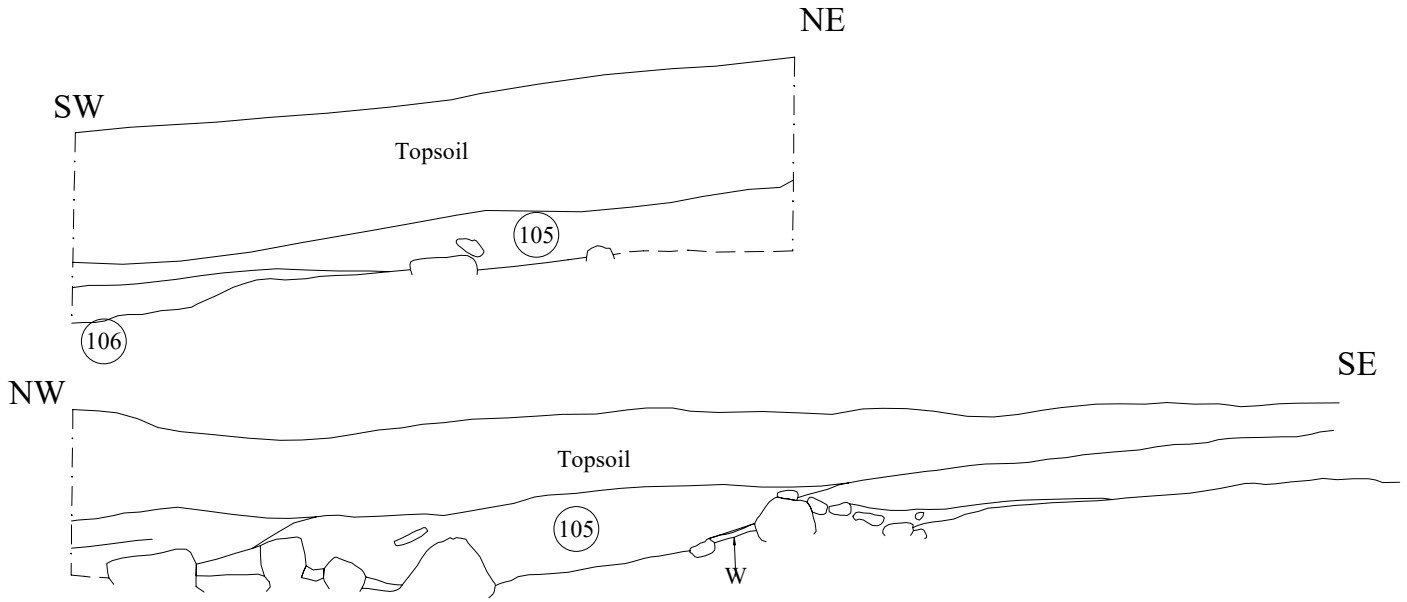


Figure 5: Section through the Burnt Mound
Scale 1:20

WNW

ESE

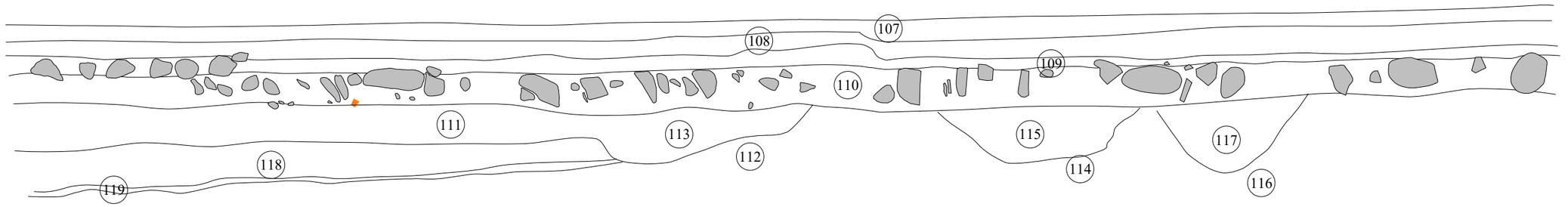


Figure 6: Section through the Road (A497)
Scale 1:30

Plate 1: Possible boundary (Context 97)

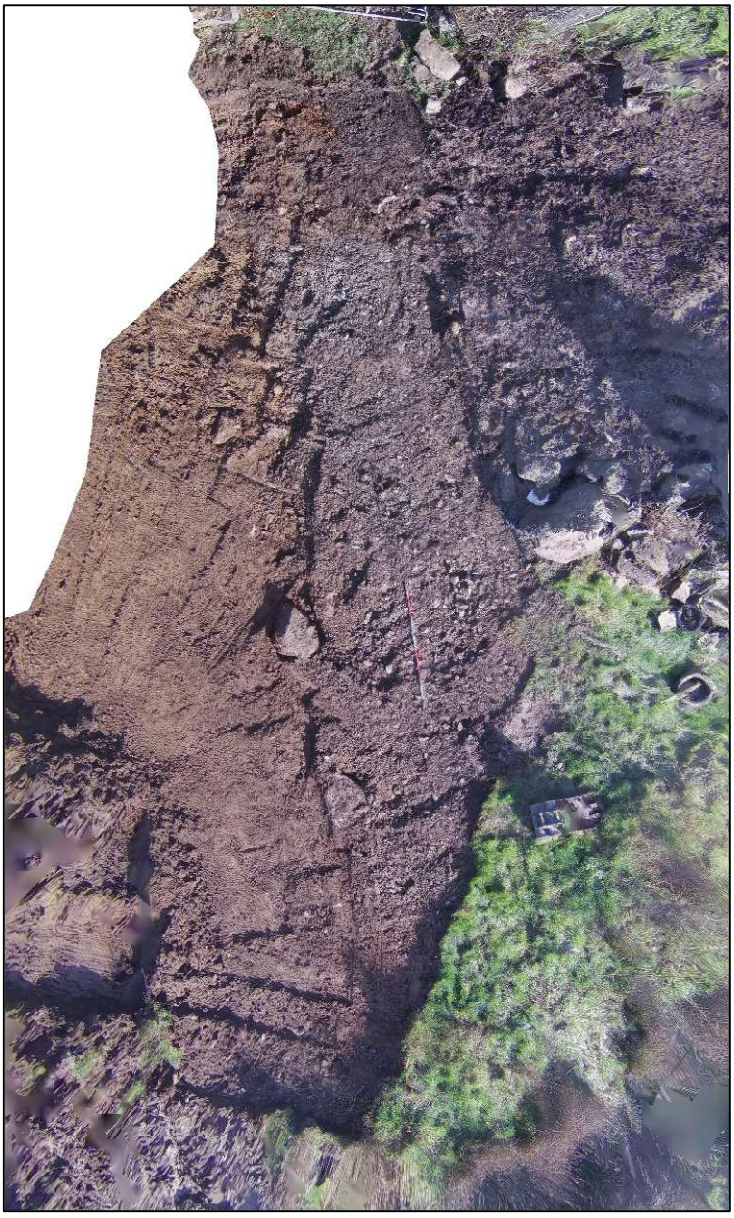


Plate 2: Track to Muriau, near to the northern edge of the development (Context 98)

Plate 3: Track to Muriau, near to standing stone (Context 55)

Plate 4: Section across the boundary (Contexts 99 - 104)

Plate 5: Section across the boundary (Context 99 - 104)

Plate 6: Burnt mound (Context 105)

Plate 7: Burnt Mound (Context 105)

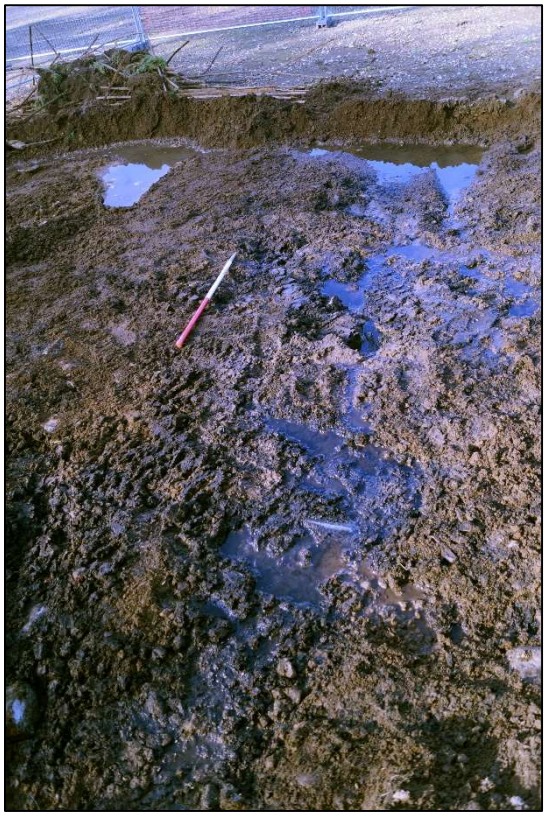


Plate 8: Burnt Mound (Context 105)

Plate 9: Burnt Mound (Context 105)

Plate 10: Burnt Mound (Context 105)

Plate 11: Burnt Mound (Context 105)

Plate 12: Burnt Mound (Context 105)

Plate 13: Burnt Mound (Context 105)

Plate 14: Section in the road

Plate 15: Section in the road

Appendix 1: Context Summary

Context	Location	Description	Relationships
97	SH 49169 38118	Line of earth fast boulders running roughly E-W. Boulders up to 500 x 300 mm in size, but more generally 300 x 200 mm. The line is a bit intermittent in places	
98	SH 49192 38119	Cobbled area marking the northern end of the drive from Muriau. Runs to the existing gate and parallel to the wall marking the western end of the lay-by. Some suggestion that the western side of the track was marked by large boulders up to 900 x 600 x 300 mm in size. The layer was seen to extend across the field to a point near to the corner of the new school building, where the eastern edge was 4 m from the corner of the building. The road appears to be below up to 450 mm of soil south of the corner of the building.	Equivalent to 55
99	SH 49300 38034	Heavily flattened earthen bank, at least 3 m wide and surviving to a height of 0.46 m constructed of Orange/brown sandy silt with the occasional large, rounded, boulders up to 300 mm in size and a moderate density of smaller, sub-angular and angular stone up to 100 mm in size. The front (south) of this bank is fronted with a series of stones (Context 100)	Abuts 100
100	SH 49300 38034	A series of sub-angular stones forming the front of the earthen bank, (Context 99) consisting of a series of stones forming the remnant of a dry-stone wall. Stones 130 x 160 mm in size	Abuts 99, Below 101
101	SH 49300 38034	Fill of ditch in front of bank. Very similar material to Context 99, from which this layer was probably derived. It also contains a series of rounded and sub-angular stones which were probably derived from the stone facing of the bank (Context 100)	Below 104 Above 100 Within 102 and 103
102	SH 49300 38034	Ditch in front of boundary. Gully, approximately 0.6 m wide and up to 0.23 m deep with a “V” shaped profile	Contains 101 Cut by 103
103	SH 49300 38034	A probable re-cut of Ditch (Context 102). Approximately 1.43 m wide and 0.3 m deep with a broad, “U” shaped profile.	Contains 101 Cuts 103
104	SH 49300 38034	A layer of hill wash below the boundary. Layer, up to 0.38 m thick consisting of a mid-brown, sandy gravel with many, moderate sized (50 – 150 mm) rounded stones	Above 101

Context	Location	Description	Relationships
105	SH 49301 38082	A spread of black silty clay with frequent small to medium fire cracked stone, (the stone was stained and heat coloured black and red) and moderate chunks of charcoal although there were flakes of charcoal throughout the whole context between 180 to 230 mm deep and 4m wide by 3m	Below topsoil Above 106
106	SH 49301 38082	Burnt soil below the burnt mound	Below 105
107	SH 49343 38067	Upper Tarmac surface of the A497. Up to 0.14 m thick	Above 108
108	SH 49343 38067	Lower Tarmac surface of the A497. Up to 0.13 m thick	Below 107 Above 109
109	SH 49343 38067	Orange brown gravel acting as the sub-base for the A497. Up to 0.13 m thick	Below 108 Above 110
110	SH 49343 38067	Possible base of an earlier road. Layer, up to 300 mm thick with many medium/large rounded cobbles between 40 and 250 mm in size in a mid-yellowish-brown sandy matrix	Below 109 Above 111, 112, 113, 114, 115, 116, 117
111	SH 49343 38067	Mid brown clayey soil layer up to 250 mm thick which merges at its south eastern end into the fill of a possible feature (Contexts 112 and 113). Possible turf line below the road.	Below 110 Above 118 Merges with 113
112	SH 49343 38067	Feature with a shallow, south-eastern side and steeper north-western side and a rounded base. It is 1.43 m wide and 0.33 m deep. Possible linear feature, such as a ditch or gully.	Below 110 Filled with 113 Cuts 118
113	SH 49343 38067	Mid brown clayey soil layer filling the possible ditch/gully Context 112	Below 110, Merges with 111 Within 112
114	SH 49343 38067	A feature 1.31 m wide and 0.36 m deep with moderately sloping sides and a flat base. Uncertain function to this feature	Below 110 Filled with 115 Cuts natural gravel
115	SH 49343 38067	Mid brown clayey soil with the occasional fleck of burnt ceramic materials.	Below 110 Within 114
116	SH 49343 38067	Feature 1.0 m wide and 0.44 m deep with sloping sides and a rounded base.	Below 110 Filled with 117 Cuts natural gravel
117	SH 49343 38067	Fill of Context 116. Yellowish brown sandy silt with the occasional medium/small (up to 100 mm) rounded stone.	Below 110 Within 116
118	SH 49343 38067	Mottled yellow and yellowish-brown clayey silt with the occasional, small (up to 50 mm) rounded and sub-angular stones. The layer is up to 280 mm thick	Below 111 Cut by 112 Above 119
119	SH 49343 38067	Thin layer of pale grey clayey soil up to 50 mm thick.	Below 118 Cut by 112

Appendix 2: Photographs in the Archive

Frame	Scale	Looking	Description
Treferthyr_001.jpg	2 m	vertical	Composite, rectified image of the line of boulders and edge of the track from Muriau (Contexts 97 and 98)
Treferthyr_002.jpg	1 m	NE	Composite, rectified image of part of the stratigraphy below the A497
Treferthyr_003.jpg	1 m	NE	Composite, rectified image of part of the stratigraphy below the A497
Treferthyr_004.jpg	1 m	NE	Composite, rectified image of part of the stratigraphy below the A497
Treferthyr_005.jpg	1 m	NE	Composite, rectified image of part of the stratigraphy below the A497
Treferthyr_006.jpg	1 m	SE	Composite, rectified image of the section through the boundary (Contexts 100 – 104)
Treferthyr_007.jpg	2 m	vertical	Composite, rectified image of the track from Muriau at its northern end (Context 98)
Treferthyr_008.jpg	2 m	vertical	Composite, rectified image of the track from Muriau at its northern end (Context 98)
Treferthyr_009.jpg	1 m	vertical	Composite, rectified image of the track from Muriau at its southern end (Context 55)
Treferthyr_010.jpg	1 m	NNE	Context 105, Burnt mound
Treferthyr_011.jpg	1 m	NW	Context 105, Burnt mound
Treferthyr_012.jpg	1 m	WNW	Context 105, Burnt mound
Treferthyr_013.jpg	1 m	S	Context 105, Burnt mound
Treferthyr_014.jpg	1 m	NW	Context 105, Burnt mound
Treferthyr_015.jpg	1 m	NW	Context 105, Burnt mound
Treferthyr_016.jpg	1 m	NNE	Context 105, Burnt mound
Treferthyr_017.jpg	1 m	SW	Context 105, Burnt mound
Treferthyr_018.jpg	1 m	SW	Context 105, Burnt mound
Treferthyr_019.jpg	1 m	SW	Context 105, Burnt mound
Treferthyr_020.jpg	1 m	SE	Context 105, Burnt mound
Treferthyr_021.jpg	1 m	ESE	Context 105, Burnt mound
Treferthyr_022.jpg	1 m	WSW	Context 105, Burnt mound
Treferthyr_023.jpg	1 m	WSW	Context 105, Burnt mound
Treferthyr_024.jpg	1 m	WNW	Context 105, Burnt mound
Treferthyr_025.jpg	1 m	NW	Context 105, Burnt mound
Treferthyr_026.jpg	1 m	NW	Context 105, Burnt mound
Treferthyr_027.jpg	1 m	NW	Context 105, Burnt mound
Treferthyr_028.jpg	1 m	NNW	Context 105, Burnt mound
Treferthyr_029.jpg	1 m	NNE	Context 105, Burnt mound
Treferthyr_030.jpg	1 m	NNE	Context 105, Burnt mound
Treferthyr_031.jpg	1 m	SE	Context 105, Burnt mound
Treferthyr_032.jpg	1 m	SSE	Context 105, Burnt mound
Treferthyr_033.jpg	1 m	S	Context 105, Burnt mound
Treferthyr_034.jpg	1 m	E	Context 105, Burnt mound
Treferthyr_035.jpg	1 m	NNE	Context 105, Burnt mound. Detail of stratigraphy
Treferthyr_036.jpg	1 m	NNE	Context 105, Burnt mound. Detail of stratigraphy
Treferthyr_037.jpg	1 m	NNE	Context 105, Burnt mound
Treferthyr_038.jpg	1 m	NNE	Context 105, Burnt mound
Treferthyr_039.jpg	1 m	NE	Context 105, Burnt mound
Treferthyr_040.jpg	1 m	NE	Context 105, Burnt mound
Treferthyr_041.jpg	1 m	NNE	Surface below Context 105, Burnt mound

Frame	Scale	Looking	Description
Treferthyr_042.jpg	1 m	NNE	Surface below Context 105, Burnt mound
Treferthyr_043.jpg	1 m	ENE	Section through the field boundary (Contexts 99 – 104)
Treferthyr_044.jpg	1 m	E	Southern end of section through the boundary (Contexts 99 – 104)
Treferthyr_045.jpg	1 m	E	Northern end of section through the boundary (Context 99 – 104)
Treferthyr_046.jpg	1 m	E	Southern end of section through the boundary (Contexts 99 – 104)
Treferthyr_047.jpg	none	NNE	Part of the stratigraphy below the A497 (First section)
Treferthyr_048.jpg	none	NNE	Part of the stratigraphy below the A497 (First section)
Treferthyr_049.jpg	none	NNE	Part of the stratigraphy below the A497 (First section)
Treferthyr_050.jpg	none	NNE	Part of the stratigraphy below the A497 (First section)
Treferthyr_051.jpg	none	NNE	Part of the stratigraphy below the A497 (First section)
Treferthyr_052.jpg	none	NNE	Part of the stratigraphy below the A497 (First section)
Treferthyr_053.jpg	none	NNE	Part of the stratigraphy below the A497 (Second section)
Treferthyr_054.jpg	none	NNE	Part of the stratigraphy below the A497 (Second section)
Treferthyr_055.jpg	none	NNE	Part of the stratigraphy below the A497 (Second section)
Treferthyr_056.jpg	none	NNE	Part of the stratigraphy below the A497 (Second section)
Treferthyr_057.jpg	none	NNE	Part of the stratigraphy below the A497 (Second section)
Treferthyr_058.jpg	none	NNE	Part of the stratigraphy below the A497 (Second section)
Treferthyr_059.jpg	none	NNE	Part of the stratigraphy below the A497 (Second section)
Treferthyr_060.jpg	none	NNE	Part of the stratigraphy below the A497 (Second section)
Treferthyr_061.jpg	none	NNE	Part of the stratigraphy below the A497 (Second section)

Appendix 3: Specification

Specification for an Archaeological Watching Brief on the site of a new school at Ysgol Treferthyr, Criccieth, Gwynedd. (Planning Reference C21/0718/41/LL)

Compiled by I.P. Brooks 07/02/23

1. *Non-Technical Summary*

1.1. Gwynedd County Council plan to build a new school on land opposite Bron Eifion Lodge, Criccieth, LL52 0RY (Figure 1). Following stages of geophysical survey, evaluation and excavation, a programme of archaeological watching brief has been commissioned by Gwynedd County Council.

2. *Background*

2.1. Gwynedd County Council plan to build a new school on land opposite Bron Eifion Lodge, Criccieth, LL52 0RY (Figure 1), Planning Reference C21/0718/41/LL

2.2. They have previously commissioned an archaeological desktop study from Aeon Archaeology (Cooke 2019) which recommended a phase of geophysical investigation took place on the site.

2.3. In September 2021, a Fluxgate Gradiometer Survey was commissioned from Engineering Archaeological Services Ltd (Brooks 2021). This showed a number of magnetic anomalies of potential archaeological origins. Of particular note is a concentration of linear anomalies, in the north east corner of the survey area, which suggests significant archaeological activity, probably alongside the road which was to become the A497.

2.4. In March 2022, an archaeological evaluation of the site was undertaken by Engineering Archaeological Services Ltd (Brooks and Jones 2022) consisting of 22 trenches, each approximately 30 x 1.8 m in size. These revealed a number of features including a series of post-medieval filed boundaries, the track crossing the site and at least one probable cist of uncertain date.

2.5. In July 2022, The Gwynedd Archaeological Planning Services recommended archaeological mitigation took place over the proposed area of the school buildings and extending to cover the area of the probable cist(s). Also, that an area around the standing stone be investigated (Brief for Archaeological Mitigation, T. Fildes dated 26th July 2022)

2.6. In his letter Fildes states that "the periphery of the town does hold potential for unknown archaeological sites. The Tithe Map suggests early variations on the field's composition, as well as being in proximity to an early (possibly even Medieval) farmstead to the south. The route of the A497 is the route of the original track in and out of Criccieth to the west, meaning that roadside sites such as this hold particular potential for associated activity."

2.7. The archaeological mitigation took place in October 2022, with an area of approximately 0.62 Ha being stripped, including the proposed area of the new school buildings and an area of 100 m^2 around the standing stone towards the southern boundary of the development.

2.8. The mitigation revealed further details of the archaeological features recorded in the evaluation trenches and located a post-medieval building platform. (Brooks 2022)

3. *Objectives*

3.1. The principal objective of the proposed watching brief are as follows:

3.1.1. To record any archaeological features disturbed by the ground works associated with the construction of the new school.

4. *Fieldwork Program*

4.1.1. It is intended to carry out an archaeological watching brief on the ground works associated with the construction of the new school. Two levels of response are proposed, dependent on the risk to the archaeological record. These responses are:

4.1.1.1. An intensive watching brief on areas of high potential risk

4.1.1.2. An intermittent watching brief on the rest of the development

4.1.2. The areas of high potential risk are considered to be:

4.1.2.1. The stripping of the topsoil associated with the proposed welfare compound and the haul/access road to the site. These areas may contain the remains of the track which originally ran to the property known as Muriau to the south of the development area (Figure 2).

4.1.2.2. Any work around the potential cist located in the evaluation.

4.1.2.3. Any work around the standing stone.

4.1.3. Analysis

4.1.4. Archive preparation

4.1.5. Report preparation

5. *Methodology*

5.1. Fieldwork

5.1.1. Within the areas of intensive watching brief, a suitably qualified archaeologist will be present during all soil moving activities, allowing for the location and recording of any archaeological features or deposits within these areas.

5.1.2. Within the areas of intermittent watching brief, a suitably qualified archaeologist will visit the site, to inspect any groundworks undertaken and record any archaeological features or significant deposits revealed. The frequency of these visits will be determined by the level of potential threat to the archaeological record within the development area by the archaeologist.

5.1.3. It will be encouraged that all topsoil and superficial deposits will be removed using a smooth faced bucket.

5.1.4. Selective hand cleaning will be undertaken to define any archaeological features recorded during topsoiling.

5.1.5. A minimum of 10% of each of the linear features and 50% of each discrete feature will be excavated.

5.1.5.1. All relationships between archaeological features will be investigated.

5.1.5.2. Specific features of significant archaeological importance (such as graves or features with significant deposits) will be fully excavated.

5.1.6. All features or archaeologically significant deposits revealed will be fully recorded including:

5.1.6.1. A written description of deposit: type, components etc.

5.1.6.2. Hand drawn plans and sections at suitable scales. Typically plans will be drawn at a scale of 1:20 or greater and sections at a scale of 1:10.

5.1.6.3. Photographs will be taken with Nikon D5300 Digital SLR Camera at a resolution of 24.2 MP

5.1.6.4. If appropriate photographs will be taken with a Panasonic Lumix DC-FT7 camera on an extendable pole. These photographs will be processed with Agisoft Metashape v. 1.6.3 to produce photogrammetric images of the trenches.

5.1.6.5. Plan drawings showing the extent and nature of any archaeological deposits or features encountered.

5.1.6.6. Section drawings of any features recorded to record vertical stratigraphy.

5.1.7. The photographs will include metric scales

5.1.8. All artefacts and ecofacts will be recorded by context.

5.1.9. Each deposit, feature or layer will be identified by a unique context number to which all other records will be related

5.1.10. Where possible, elevation drawings of feature half sections to record vertical stratigraphy.

5.1.11. Where appropriate, deposits will be sampled for environmental, dating or technological evidence. Samples will be fully recorded and packed appropriately for future analysis.

5.1.11.1. Sampling will be carried out in accordance with the procedures outlined in English Heritage. 2011. Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post-excavation.

5.1.11.2. Bulk samples are likely to be in the range of 10 – 40l depending on the reason for the sample and the availability of suitable material.

5.1.12. If human remains are encountered all works will stop until the appropriate permissions have been obtained. A further specification will be submitted to detail the excavation of any human remains and the subsequent specialist reports.

5.2. The Gwynedd Archaeological Planning service will be notified immediately if significant archaeological deposits, features or artefacts are located.

5.3. Post Excavation Analysis

5.3.1. If there is little, or no, archaeological deposits/features or remains recorded during the evaluation will progress immediately on to the archive report.

5.3.2. If significant archaeological remains/features/deposits are encountered. On completion of the fieldwork an assessment of the archaeological record from the site, will be made and the project design updated. Including an estimate on the cost of the post-excavation process.

5.3.3. On approval of the updated project design the full archaeological report will be undertaken to including the commissioning of all specialist reports recommended by the revised project design.

5.4. Finds

5.4.1. The intension is to archive any suitable finds with STORIEL in Bangor.

5.4.2. Any flint artefacts will be studied by I.P. Brooks for Engineering Archaeological Services Ltd.

5.4.3. Any pottery will be studied by an appropriate specialist to be agreed in consultation with the Curatorial Archaeologist.

5.4.3.1. It is intended that M. Jones (CR Archaeology) will report on the post-medieval finds including any pottery collected

5.4.4. Any metal or other special finds will be studied by an appropriate specialist to be agreed in consultation with the Curatorial Archaeologist

5.4.5. All ceramic, bone and stone artefacts will be cleaned and processed immediately following the watching brief.

5.4.6. Metal artefacts will be stored and managed on site according to the UK Institute of Conservation Guidelines.

5.4.7. Any samples taken for environmental analysis will be assessed and studied by an appropriate specialist to be agreed in consultation with the Curatorial Archaeologist

5.4.8. All finds will be bagged by context with the exception of closely datable or "special" finds which will be recorded with a 3 D position and will be bagged separately

5.4.9. The requirement for specialist archaeological reports will be discussed with the Curatorial Archaeologist. The extent and cost of any such report will be discussed with the client and a suitable level of response formulated in discussion between the Archaeologist and the Curatorial Archaeologist.

5.4.10. The initial report will include an assessment of the finds from the work and a recommendation for further study if require.

5.5. Archive Preparation and Report Preparation

5.5.1. On competition of fieldwork an archive of the results will be prepared.

5.5.2. The digital records will be archived with the Royal Commission on Ancient and Historic Monuments of Wales

5.5.3. The digital archive will be prepared in line with Royal Commission on Ancient and Historic Monuments of Wales. 2015. Guidelines for digital archives

5.5.4. The deposition of any find with a local museum will be discussed with the owner and the development control archaeologist with a strong recommendation that any finds are deposited in a suitable local museum. This is likely to be STORIEL in Bangor.

5.5.5. A summary report on the findings of the investigations will be prepared and completed within four weeks from completion of the project. This will summarise the results of the project including;

5.5.5.1. A site location plan

5.5.5.2. A plan of the site locating any features or archaeological deposits located.

5.5.5.3. An outline methodology

5.5.5.4. The results of the Watching Brief.

5.5.5.5. A full bibliography

5.5.5.6. A copy the agreed specification

5.5.5.7. An assessment of the potential for further archaeological investigation

5.5.5.8. Up to five copies of the report will be provided.

5.5.5.9. A digital copy of the report will also be provided.

5.5.5.10. A digital copy of the report will be supplied to the Gwynedd Historic Environment Record

5.5.5.11. A digital copy of the report will be supplied to Gwynedd Archaeological Planning Service

5.5.5.12. The preparation of the report will conform to the Welsh Archaeological Trusts 2018 "Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)"

6. *Staff*

6.1. The project will be carried out by Ian Brooks, PhD, BA, MCIfA, FSA

6.2. The staff will include M. Jones BA (CR Archaeology) and C. Rees BA, MA, MCIfA

7. Timetable

7.1. The timetable will be defined by the construction programme and is therefore beyond the control of the archaeologist.

8. General

8.1. CIfA Code of Conduct

8.1.1. All staff will abide by, and all procedures be carried out in accordance with the Chartered Institute for Archaeologists' Code of Conduct

8.2. Health and Safety

8.2.1. EAS Ltd adopt and adhere to safe working practices at all times.

8.2.2. A copy of the company's general statement of policy is available on request.

8.3. Staff

8.3.1. The project will be directed by Dr I.P. Brooks MCIfA FSA

8.3.2. Project Staff will include Dr I.P. Brooks MCIfA FSA, M. Jones B.A. and C. Rees B.A., M.A. MCIfA.

8.4. Curatorial Monitoring

8.4.1. The Gwynedd Archaeological Planning Service will be informed as to the start date and progress of the fieldwork.

8.5. Insurance

8.5.1. EAS Ltd carries all necessary Public and Employee Liability Insurances.

8.5.2. EAS Ltd carries Professional Indemnity Insurance

9. Data Management

9.1. Photographs will be taken in Nikon NEF (Raw) format

9.1.1. These will be converted to TIFF for archiving and JPEG for illustrations and general use.

9.1.2. Photographs for photogrammetry will be taken in JPEG format and processed using Agisoft Metascape v. 1.6.3. Orthographically corrected elevations photos will be produced in JPEG format and converted to TIFF for archiving.

9.2. Any topographic survey will be carried out using a Leica TS06 total station with the data processed using NRG Engineering Surveying System V2016.00.

9.2.1. Survey files will be converted to DXF format.

9.3. Initial written notes will be made on an "i Pad" using the "Pages" app. These will be converted to WORD format (.docx) format on downloading

9.4. The text for the report will be produced in Word (.docx) format

9.5. Drawing will be made in TurboCad 2021 v. 28.0 and stored in .TCW format. These will be converted into .DXF or .DWG format for archiving.

9.6. The report will converted to .PDF format using Expert PDF 15.

9.7. All files will be stored on the company laptop computer and backed up onto a suitable storage device.

10. Copyright

10.1. EAS Ltd shall retain full copyright of any commissioned reports, tender documents or other project documentation, under the Copyrights, Designs and Patents Act 1988 with all rights reserved: excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.

10.2. EAS Ltd is prepared to assign a licence to the client for the use of the report and any associated data.

References

Brooks, I.P. 2021. Ysgol Treferthyr, Criccieth, Gwynedd: Geophysical Survey. *Engineering Archaeological Services Ltd. Client Report 2021/08*

Brooks, I.P. 2022 Ysgol Treferthyr, Criccieth, Gwynedd: Excavation. *Engineering Archaeological Services Ltd. Client Report 2022/11*

Brooks, I.P. and Jones, M. 2022. Ysgol Treferthyr, Criccieth, Gwynedd: Archaeological Evaluation. *Engineering Archaeological Services Ltd. Client Report 2022/02*

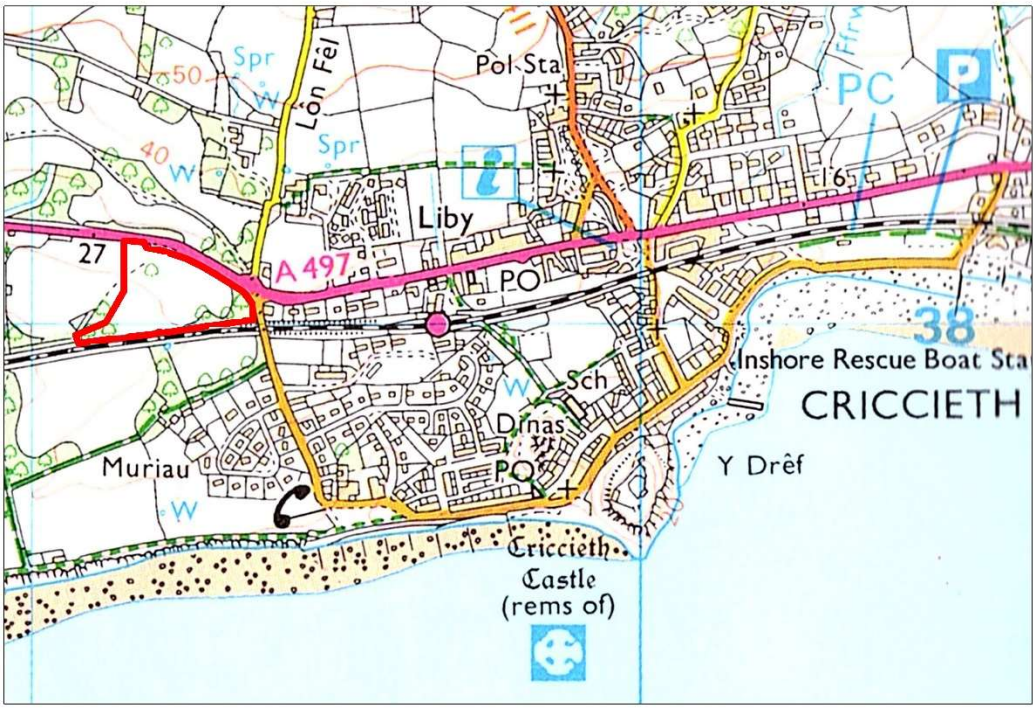


Figure 1: Location

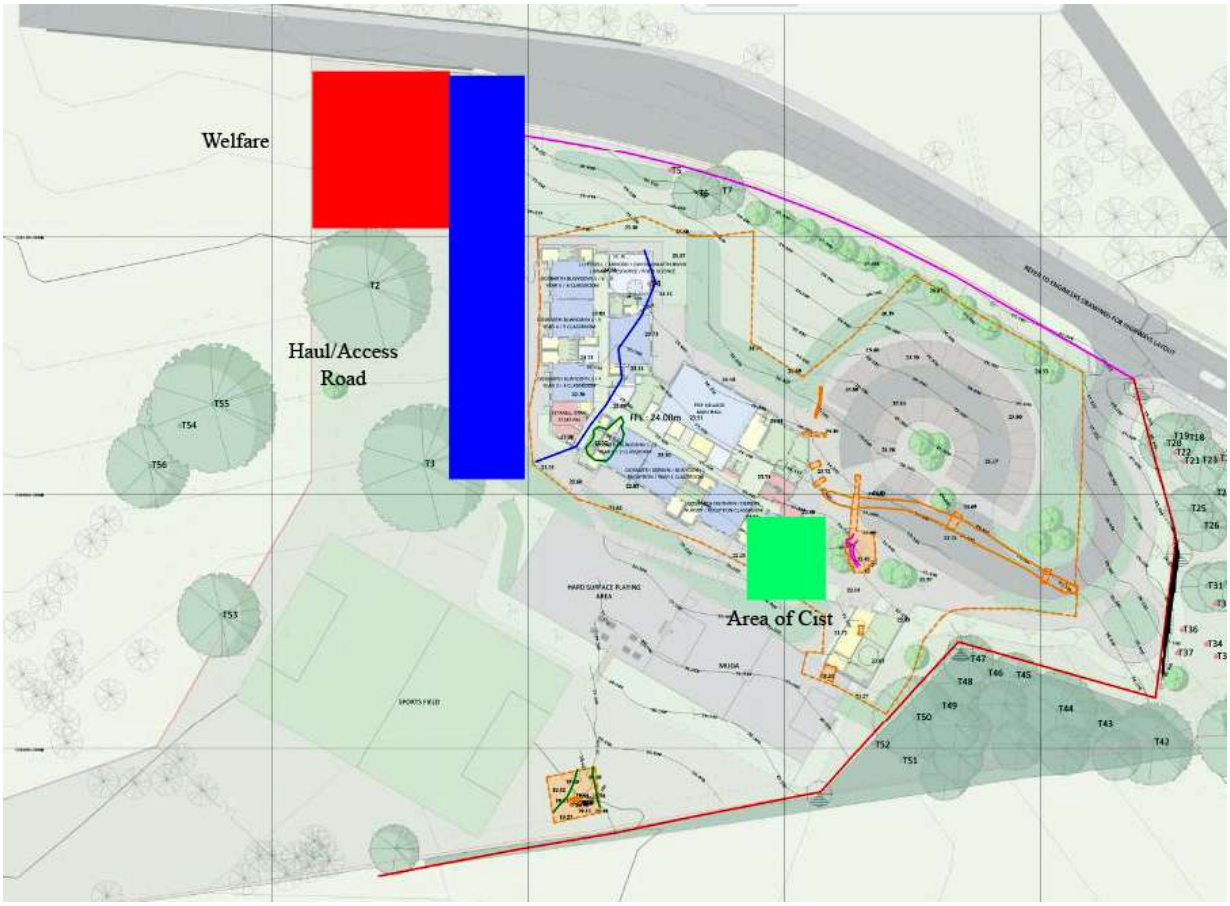


Figure 2: Proposed Development

Appendix 4: Radiocarbon Date Certificate

UBANo	Sample ID	Material Type	^{14}C Age	±	F14C	±	mg Graphite
UBA-57672	CNS24 105	charcoal	2854	26	0.7010	0.0023	0.971

Ian Brooks
Engineering Archaeological Services Ltd
Unit 2 Glanypwll Workshops
Ffordd Tanygrisiau
Blaenau Ffestiniog, Gwynedd
LL41 3NW
Wales

^{14}CHRONO Centre
Queens University Belfast
42 Fitzwilliam Street
Belfast BT9 6AX
Northern Ireland

Radiocarbon Date Certificate

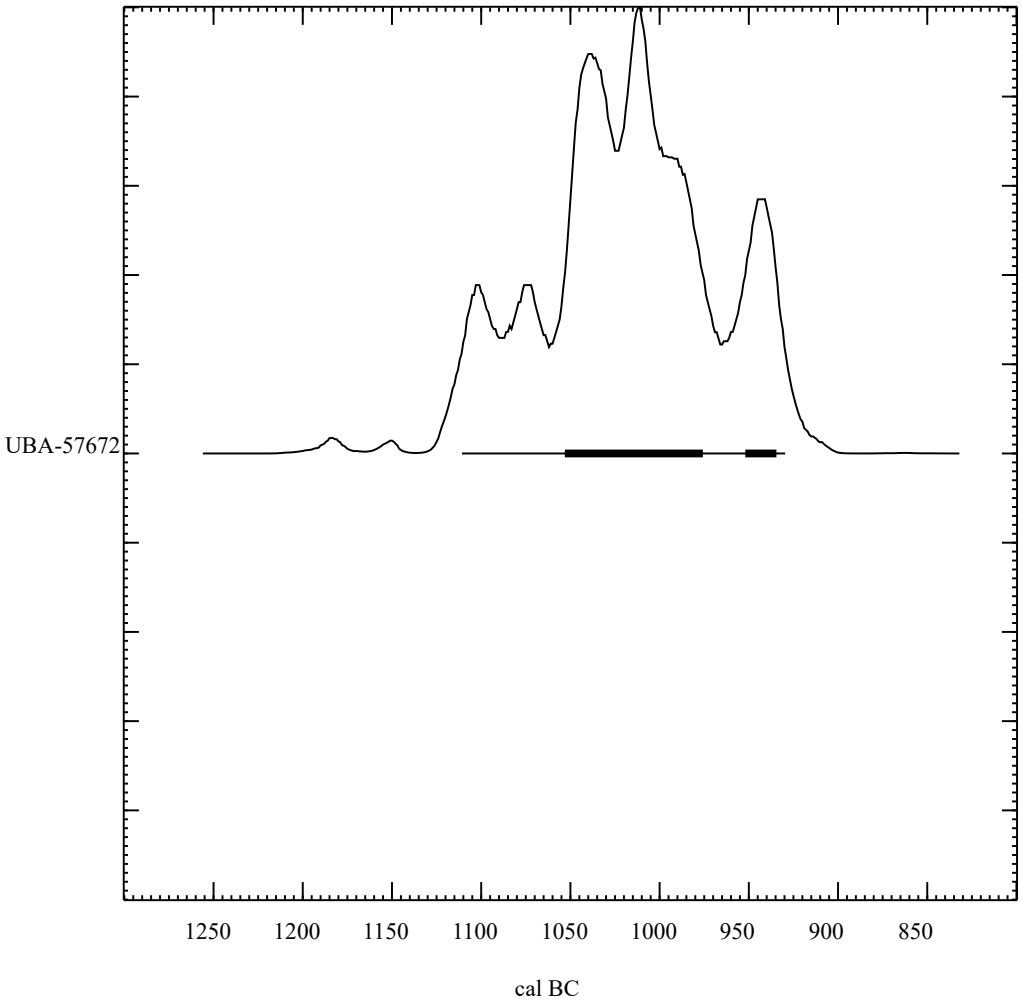
Laboratory Identification:	UBA-57672
Date of Measurement:	2025-09-11
Site:	Criccieth New School
Sample ID:	CNS24 105
Material Dated:	charcoal
Pretreatment:	AAA
mg Graphite:	0.971
Submitted by:	Ian Brooks

Conventional ^{14}C Age:	2854±26 BP
Fraction corrected	using AMS $\delta^{13}C$

Marine samples will require re-calibration with the marine calibration curve

```
 1
             RADIOCARBON CALIBRATION PROGRAM*
                       CALIB REV8.2
        Copyright 1986-2020 M Stuiver and PJ Reimer
*To be used in conjunction with:
Stuiver, M., and Reimer, P.J., 1993, Radiocarbon, 35, 215-230.

UBA-57672
57672
Radiocarbon Age BP   2854 +/-   26
Calibration data set: intcal20.14c               # Reimer et al. 2020
  % area enclosed       cal AD age ranges            relative area under
                                                   probability distribution
  68.3 (1 sigma)     cal BC 1053- 976                        0.867
                            952- 935                        0.133
  95.4 (2 sigma)     cal BC 1111- 930                        1.000
  Median Probability: -1018

 References for calibration datasets:
Reimer P, Austin WEN, Bard E, Bayliss A, Blackwell PG, Bronk Ramsey C, Butzin M
Edwards RL, Friedrich M, Grootes PM, Guilderson TP, Hajdas I, Heaton TJ, Hogg A
Kromer B, Manning SW, Muscheler R, Palmer JG, Pearson C, van der Plicht J, Reim
Richards DA, Scott EM, Southon JR, Turney CSM, Wacker L, Adolphi F, BÃ¼ntgen U,
Fahrni S, Fogtmann-Schulz A, Friedrich R, KÃ¶hler P, Kudsk S, Miyake F, Olsen J
Sakamoto M, Sookdeo A, Talamo S. 2020.
The IntCal20 Northern Hemisphere radiocarbon age calibration curve (0-55 cal kB
Radiocarbon 62. doi: 10.1017/RDC.2020.41.



Comments:
* This standard deviation (error) includes a lab error multiplier.
** 1 sigma = square root of (sample std. dev.^2 + curve std. dev.^2)
** 2 sigma = 2 x square root of (sample std. dev.^2 + curve std. dev.^2)
where ^2 = quantity squared.
[ ] = calibrated range impinges on end of calibration data set
0* represents a "negative" age BP
1955* or 1960* denote influence of nuclear testing C-14

NOTE:  Cal ages and ranges are rounded to the nearest year which
       may be too precise in many instances.  Users are advised to
       round results to the nearest 10 yr for samples with standard
       deviation in the radiocarbon age greater than 50 yr.
```

Posterior Probability Distributions



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