Event PRN 100598

Plas Crûg Primary School, Aberystwyth, Ceredigion

Archaeological watching brief

February 2011

GGAT report no. 2010/054
Project no.P1380
National Grid Reference:
SN 5895 8115

A report for Ceredigion County Council
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Front cover: 'Fortified farm near Aberystwyth' by RA Oliver, 1853 (reproduced by permission of Aberystwyth Museum)

Summary

Ceredigion County Council commissioned the Glamorgan-Gwent Archaeological Trust Projects Division (GGAT Projects) to undertake an archaeological watching brief during intrusive groundwork on land at Plas Crûg Primary School, Aberystwyth, Ceredigion. The watching brief was necessary to comply with the condition placed upon the development works (Planning reference A090164CD) by the Local Planning Authority.

Significant archaeological remains were encountered in one area of groundworks, adjacent to the existing school building, which are thought to be the remains of the base of a tower known to have stood on the site into the 20th century.

Acknowledgements

This project was managed by Richard Lewis BA MIfA (Head of Projects) and the fieldwork undertaken by Ellie Graham BA AIfA and Richard Roberts BA of GGAT Projects staff. The photographs and report were prepared by Ellie Graham, with illustrations by Paul Jones (GGAT Senior Illustrator). Analysis of the mortar samples was undertaken by Martin Locock BA MifA.

We would like to thank Michael Freeman (Curator of the Ceredigion Museum) for the numerous written, drawn and photographic historic documents he provided, and Richard Suggett of the RCAHMW for his observations and comments on the structural remains on site.

1 Introduction

1.1 Project background and commission

Ceredigion County Council have submitted a planning application (Ref No A090164CD) to construct an extension to Plas Crûg Primary School, Aberystwyth, Ceredigion. The Curatorial Division of the Dyfed Archaeological Trust (acting as the Council's archaeological advisors) have indicated the potential of encountering significant archaeological features within the proposed development area, and have recommended that an archaeological watching brief should be conducted on all groundworks associated with the development.

The Glamorgan-Gwent Archaeological Trust Projects Division (GGAT Projects) was commissioned by Ceredigion County Council to undertake the required archaeological watching brief. This was undertaken on the 12th January, and between 25th January and 2nd February 2010.

1.2 Location, Topography and Geology (Figures 1, 2)

The land proposed for development covers approximately 0.125ha, and is centred at NGR SN 5895 8115, on the tarmac playground to the west of the buildings of Plas Crûg Primary School, Aberystwyth. The area containing the ground works measured approximately 50m by 25m. The site is located at the summit of a gentle slope, on the northern bank of the River Rheidol, in a position that would have offered commanding views over the floodplain of the Rheidol. The geology consists of Palaeozoic slate mudstone and siltstone, with fine silty loam soils, shallow in places with some bedrock outcropping locally, while on the floodplain is a deep, stone-free river alluvium of fine silty and clayey soils. The site itself sits on an outcrop of the siltstone bedrock surrounded by river alluvia.

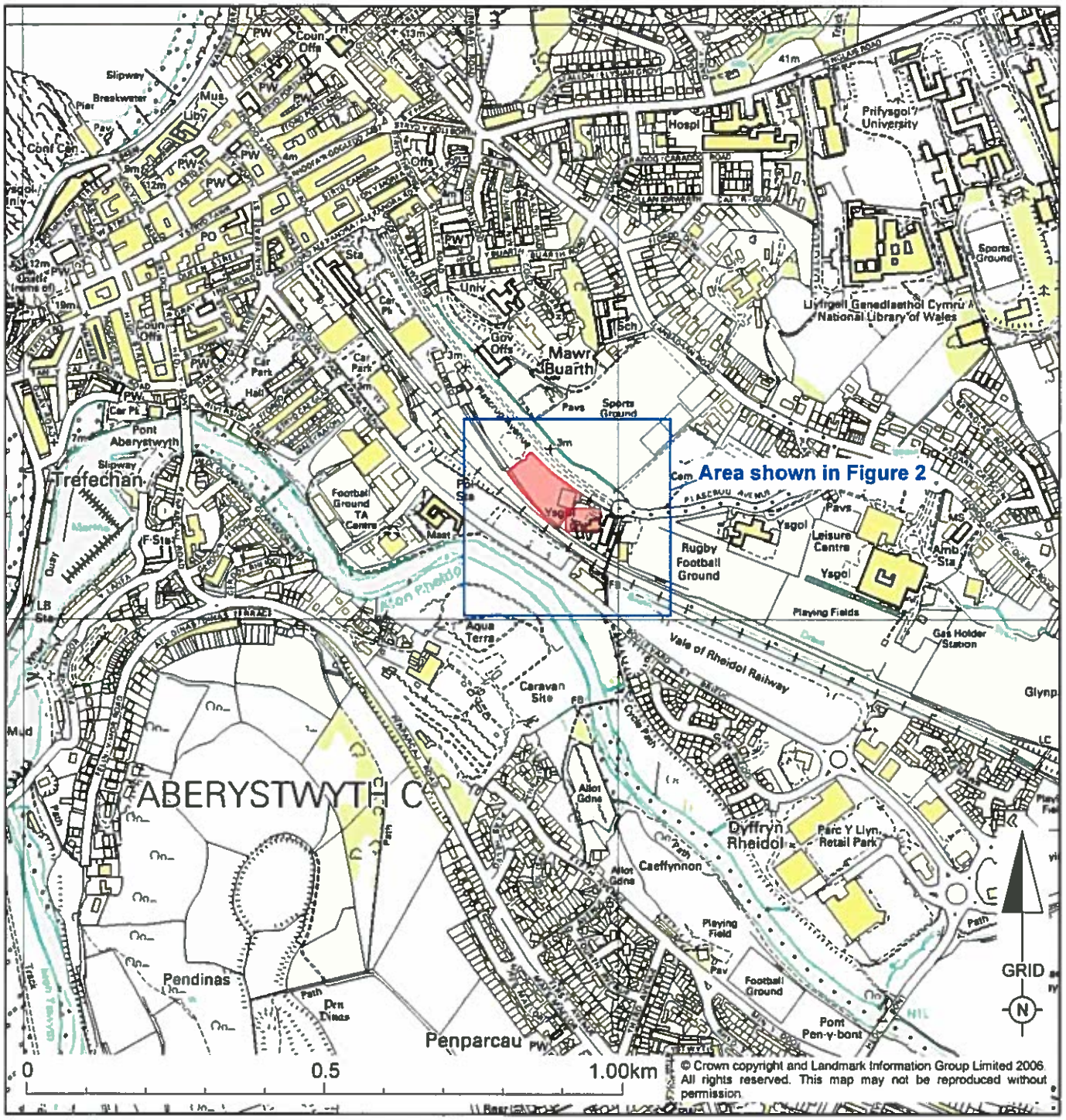

Figure 1. Location plan

1.3 Historical and archaeological background

Aberystwyth was created by charter of King Edward I in 1277 with the purpose of strengthening the English presence in Ceredigion. The land was said to be previously "empty because of a scarcity of people and well-nigh deserted" before English settlers were brought in by Gilbert fitz Richard in the early 12th century (Jones 1952). The Edwardian castle at the mouth of the River Rheidol was known as Llanbadarn Castle, referring to the parish of the church built by Paternus in the 6th century, but it gradually acquired its current name, probably from an earlier Norman castle overlooking the Ystwyth. An earthwork uncovered by F. S. Wright on Tanycastell hill (Llanychaiarn), 2.4km to the south of Aberystwyth is widely accepted as representing the ruins of this early Norman castle, reported to have been built by Gilbert fitz Richard in 1109 or 1110 (Griffiths 1977).

After the destruction of the first castle at Llanychaiarn in 1136 and prior to the erection of Aberystwyth Castle in 1277, there is mention in the *Brut y Tywysogion* of Rhys ap Gruffudd breaching and burning a castle called Aber-rheidol in 1164. The exact position of this castle is unknown, but there is a strong case for a location at Plas Crûg, as it fulfils the general descriptions of Aber-rheidol Castle; between Llanbadarn Fawr and the medieval town of Aberystwyth. The early name of Plas Crûg, traceable as far back as 1588, is Crûg y Lliw ('mound of the leader' or 'prince', modern Welsh *llyw* (Griffiths 1994, 330)).

A fortified tower or strong house stood at Plas Crûg and is referred to in numerous descriptions made by travellers who visited the area between the late 18th and the first half of the 19th century, as it had become an attraction for visitors, and stories relating it to historical events are common. It is referred to in around thirty documents from 1667 to 1965, as well as thirty diaries, guide books and directories of the 18th and 19th centuries. Furthermore, it is also depicted on fourteen maps from 1764 to 1904; in fifteen drawings and paintings and twelve photographs (Freeman 2004). These describe a ruinous group of stone buildings, consisting of a crenellated tower with a first-floor entrance, in addition to a small cottage adjoining, and a substantial building with a projecting gable-end chimney beyond this. The structures are situated on a natural outcrop in the middle of the flood plain of the Rheidol, about 0.8km from the centre of Aberystwyth. The tower has the appearance of a fortified 12th century keep, but it may possibly have been built or rebuilt during the second half of the 18th century by the Powells of Nanteos as a folly, and had been incorporated into a farmhouse by the end of the century. By the mid-19th century, the tower was in a ruinous state and was restored. The battlements were replaced and the first-floor door was converted into a window. Possibly at the same time, the cottage roof was raised. The site had become the property of the Aberystwyth Town Council who leased it out as a market garden. In *c*1969 it was demolished to make way for a school, built in 1970. The Royal Commission on Ancient Monuments in Wales (RCAHMW) inspected the site prior to its destruction and came to the conclusion that all the remains were 19th century in date. No detailed records, photographs or drawings were made.

A leat to take water from the Rheidol to the mill in Mill Street was constructed during the 16th century at the latest, and passed around two sides of the site with the river forming a boundary on the third side, the fourth being liable to flooding. An avenue and footpath were created along the leat by 1834, enabling people to walk from Aberystwyth to the church at Llanbadarn Fawr and view the ruins of Plas Crûg.

An archaeological field evaluation carried out on the site in September and October 2009 (Egloff and Graham 2009) excavated two trenches on the west side of the site. No medieval deposits were revealed, although the southern trench contained an agricultural soil from which 19th century finds were recovered, and a likely Post-medieval pit or foundation trench. These were truncated by rubble and soils used as terracing for the school playground, which were the only deposits encountered in the northern trench.

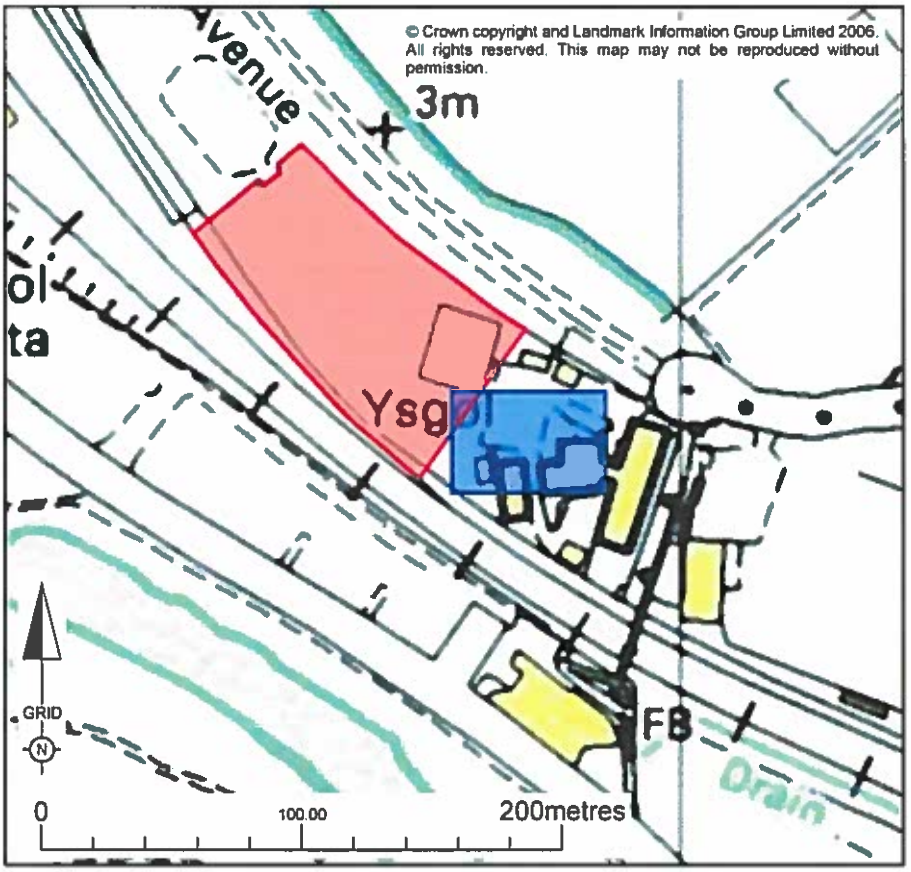

Figure 2. Location of development showing eastern and western areas

2 Methodology

The excavation for foundations was observed under archaeological conditions in the Eastern Area and the topsoil strip of a large area to the west (Western Area) was also observed (Figure 2). The watching brief was undertaken in accordance with the requirements of the Institute for Archaeologists' *Standard and Guidance for Archaeological Watching Briefs* (1994, revised 2001, 2008). The foundation trenches were mechanically excavated using both toothless and toothed buckets between 0.4m and 1m wide, with a depth varying between a minimum of 1m and a maximum of 2.0m. The width varied between 0.4 and 0.6m.

A full written, drawn and photographic record was made of all archaeological contexts, in accordance with the GGAT *Manual of Excavation Recording Techniques*. Contexts were recorded using a single continuous numbering system, and are summarised in Appendix I. All significant contexts were photographed. Finds were selected according to the GGAT *Manual of Excavation Recording Techniques* discard policy; no finds were retained as they were all identified on-site as modern.

An archive of records relating to the preparation of the reports has been prepared to the specifications in *Management of Archaeological Projects* (English Heritage, 1991) Appendix 6 and ICON's (formerly UKIC's) *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* 2007.

After an appropriate period has elapsed, copies of the report and archive index will be deposited with the regional Historic Environment Record (HER). A copy of the report and archive index will also be deposited with the National Monuments Record, RCAHMW, Aberystwyth.

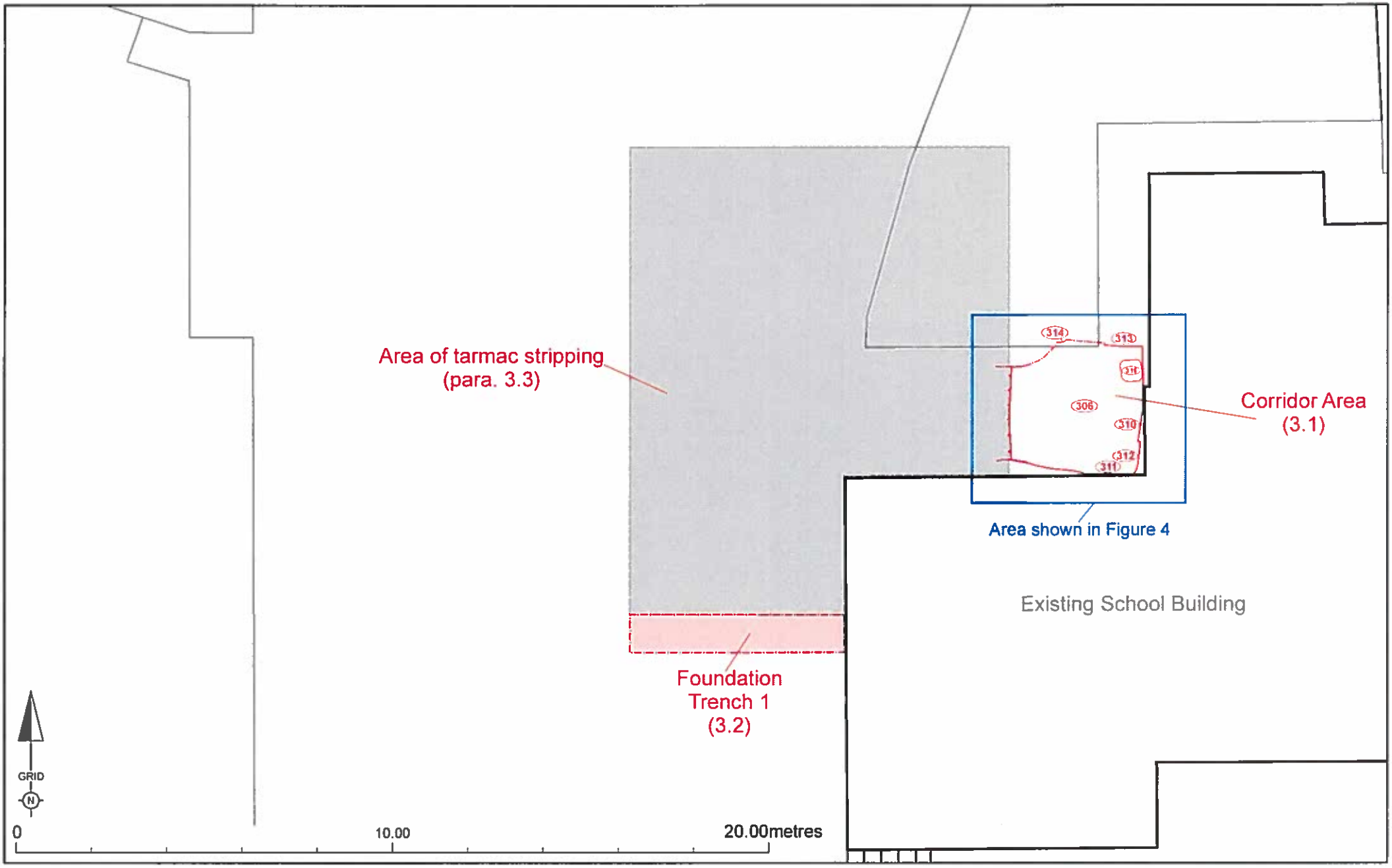

Figure 3. Plan showing detail of eastern area

3 Results

The results for the excavation for foundations observed in the Eastern Area and the topsoil strip of a large area to the west (Western Area) are detailed below.

Eastern Area

3.1 Corridor Area (Figures 3, 4, 5 and 6)

The basal deposit encountered in all parts of the eastern area was a natural yellow-orange silty clay (**307/319**), which contained occasional sub-angular to sub-rounded stones, including some pieces of ironstone, with frequent iron panning. This deposit was excavated to a maximum of 0.6m, but was not bottomed. In the corridor area, this was overlain by cobble layer (**308**), which consisted of rounded cobbles up to *c.*0.2m contained within a grey silty clay matrix. This layer appeared to be formed of a single course of cobbles, laid on edge, between 0.4m and 0.5m deep. This was overlain by concrete slab (**306**), which measured 3.5m square and was 0.1m thick, and which abutted the walls of building **309** (**Plate 1**).

The building (**309**) consisted of four main walls, **310, 311, 313** and **314**, forming the east, south and north sides, with a fifth, **312,** representing the later blocking of an east-facing opening in **310 (Plate 2)**. Wall **310** was constructed of squared stone blocks bonded with mortar, with a layer of whitewash visible underneath a later layer of lime plaster (**Plate 3**). It ran for a length of 3.5m on a north-south alignment, and survived to a height of between 1m and 1.2m. Its exposed width was at least 0.3m, but the full width could not be established due to the presence of a concrete-capped electricity cable trench and the foundations of the modern school building. It survived to approximately twelve rough courses, but this was difficult to establish with certainty as much of the structure was obscured by the later render. The stones used appeared to be up to *c.*0.3m long and *c.*0.1m thick, with a single brick included in the construction. There was originally an opening at the south end of the wall, but this had been blocked (**312**) at a later date.

The south side of the building was formed by wall **311**, aligned east-west. It also appears to have been constructed of roughly-shaped stone blocks of similar dimensions to those of **310**, but again this was difficult to ascertain as the face of the wall was largely covered in plaster. Little of this wall survived; it stood to 0.55m at the east end, and dropped to the level of the concrete slab to the west after a length of 1.5m, where the concrete foundations of the modern school building directly overlay it (**Plate 4**).

The east-west aligned walls **313** and **314** formed the north side of the building. Wall **313** represented the return of **310** and survived to approximately thirteen rough courses, standing up to 1.25m high, 1.1m long east-west and 0.82m thick. The construction was similar to that of **310**; the larger facing stones had dimensions of up to 0.5m by 0.3m by 0.1m, and the core was of rubble, but again the plaster largely obscured the face of the wall. Wall **310** was mortar-bonded, with several different types of mortar visible in its construction, both at its core and face, though there were also traces of clay bonding between some of the stones. Its west end terminated at a north-facing doorway, 1.1m wide. On the west side of the doorway, wall **314** continued along the same alignment. It survived to a height of 0.8m and 0.55m was exposed of its length. The wall survived to nine courses, but the uppermost had been heavily disturbed by tree-root activity. It appeared to have been roughly coursed and constructed of stones generally slightly smaller than the other walls of this building,

with maximum dimensions of 0.3m by 0.1m. There were traces of plaster around the base of the wall, though it did not survive as well as on walls **310, 311, 312** or **313**, probably owing to the damage caused by tree roots. The construction of this wall generally appeared to be rougher than that of the others, but this might also be the result of the destructive action of tree roots. From its external appearance, the stones of the wall seemed to have been bonded with mortar, though there also appeared to have been some elements that were clay-bonded. At the north-facing doorway, the structure formed a splayed entrance on the west side, unlike the east side, which was straight.

The latest element in the sequence of this structure appears to have been wall **312,** which blocked the former east-facing opening in wall **310** (**Plate 6**). The doorway was 1m wide, and the blocking survived to a height of 1.1m, was composed of approximately twelve courses, and constructed of mortar-bonded, roughly-squared stone blocks of up to 0.45m in length by 0.18m thick. Like wall **310,** the structure appears to have been covered in plaster, with a thick coating of paint prior to this. It was slightly battered, so that at the base it was level with wall **310** but at the top was set back by 0.18m.

All of these walls were butted by the concrete slab floor, **306,** which was 0.1m thick and square, measuring 3.5m north-south by 3.5m east-west. Sitting on top of this flooring was an area of burning approximately 1.5m square, centred on an iron pot-bellied stove, or boiler (**315**). It was located in the northeast corner of the building, although there was no evidence of a chimney (**Plate 7**). Boiler **315** consisted of a square iron stand with rounded corners, 0.5m square, tapering to 0.3m square towards the middle and splaying out at the top, although the upper section was badly fragmented. Within the rectangular box were several firebricks, and sitting on top was a large iron pot, 0.6m in diameter. The lid of the boiler was found next to the main body. It appears to have been used in this part of the room, as there was significant evidence of burning, but it had certainly been moved from its original position, as the door of the stove faced directly towards wall **313.**

The interior of structure **309** was backfilled with rubble deposit **305**, a modern layer consisting of building debris, which was found across the corridor area and averaged 1.35m in depth, although this varied across the area to form the slope of the bank. It consisted of complete and broken brick, modern roof-tile, pieces of structural sandstone and siltstone up to 0.7m in size, some of which were worked, or had attached plaster and paint, lumps of tarmac, concrete and mortar, and modern plastic pipe, all contained within a yellow-grey silty sand matrix. In parts of the deposit, there was significant bioturbation in the form of tree-root activity. Context **305** appears to have been a dump of rubble deposited to make up the level of the bank leading from the playground to the school buildings.

This make up deposit (**305**) underlay a modern concrete-capped service (**304**), aligned north-south and 0.5m wide, as well as three layers of hardcore, **301, 302** and **303.** Deposit **301** measured 2.5m east-west and 1.5m north-south, varying in depth between 0.3m and 0.4m. It was composed of a dark grey-yellow sand and contained frequent inclusions of angular stone chippings, intact and fragmentary brick, small pieces of concrete, rounded pebbles and tarmac lumps. Some pieces of stone contained in this deposit may have been structural in nature. It appears to have been laid as a hardcore for the tarmac path (**300**) leading from the playground to the building. Deposit **302** also overlay **305**, and consisted of angular stone chippings

contained within a grey sandy matrix covering an area of 2m east-west and 1.5m north-south, and had a depth of 0.1m. This also formed a layer of hardcore for the tarmac path. Hardcore layer **303** measured 2m east-west and 1.5m north-south, with a depth of 0.1m. It consisted of frequent angular chippings of up to 0.02m in diameter held in a dark grey-yellow matrix. All of these layers of hardcore were overlain by tarmac **300**, and by topsoil **316**. Tarmac surface **300** measured on average between 0.1m and 0.15m in depth. Topsoil **316**, which also physically overlay rubble layer **305** in parts, was a mid grey-brown silt loam up to 0.4m deep in places, containing occasional small angular and sub-rounded pebbles, with frequent root activity from trees and grass.

3.2 Foundation Trench 1 (Figure 3)

In Foundation Trench 1, the natural yellow-orange silty clay **307/319** was excavated to a depth of 0.3m but was not bottomed, and was overlain by deposit **339**. This deposit was 0.17m in depth and consisting of fragments of shale, up to 0.2m in size, lying horizontally within a matrix of yellow and grey clay, which appeared to be very similar to the naturally occurring bedrock on the site. This was in turn overlain by **338**, a dark brown-grey silty clay, 0.26m in depth, containing moderate fragments of shale and angular stone up to 0.06m in diameter, which formed a make-up layer terracing the site. Overlying this was deposit **337**, a rubble make-up layer up to 0.5m in depth, with frequent fragments of brick, shale and rounded pebbles contained in a grey-brown silt loam matrix, which also appears to have been used as terracing for the playground. Deposit **337** underlay **318**, which was 0.5m in depth and composed of a compacted hardcore layer formed of dark grey-black silty clay, with frequent angular stone chippings, bricks and blocks of stone. This layer was cut by **325**, a linear north-south service trench for water, measuring 0.6m in width and 0.8m in depth. The fill (**326**) was a grey silty sand containing angular chippings, stone blocks and pieces of shale up to 0.2m in diameter (**Plate 9**). Deposit **318** was also cut by **320**, a small, shallow trench (0.15m in width and 0.15m in depth) for an electricity cable running north-south, the fill of which (**321**) consisted of redeposited natural. Both these service trenches were overlain by **317**, a thin (0.2m in depth) deposit, consisting of angular to very angular stone chippings contained within grey sand, and laid as an upper hardcore for the playground surface.

Deposit **317** was cut by a construction trench (**322**) for swimming pool **332**. The trench was *c.*1.2m deep and 1.3m wide, and stepped out on the east side. The primary fill (**333**) of the construction cut was a loose dark brown-black sandy silt, 0.25m in depth and containing frequent sub-rounded and angular stone and fragments of shale (**Plate 8**). The secondary fill (**334**) was a brown-grey clay loam, a minimum of 0.3m in depth, containing some redeposited natural, with moderate angular and sub-rounded stones, shale, and some root activity. Overlying all of this was path **335**, measuring 1.5m in width and 0.1m in depth. It was composed of 0.5m square concrete slabs and kerbing running north-south around the edge of the pool building (**340**). The wall of which measured 0.3m in width, aligned north-south and was constructed of brick. The swimming pool itself (**332**) measured 1m in depth and *c.*12m north-south by *c.*7m east-west. The structure was composed of breeze-blocks lined with concrete, with a walkway *c.*1.5m wide on the east, north and south sides. When it was closed in the late 20th century, it was backfilled with shale and siltstone (**323**), apparently similar to the naturally-occurring bedrock on the site, and then capped in a layer of concrete (**324**).

Deposit **317** was also cut by service trench **327**, a foul-water drain, which ran north-south. It measured 0.4m in width and 0.7m in depth. The fill (**328**) was a yellow-grey silty sand with frequent angular stone chippings, and pockets of redeposited natural (**Plate 9**). Service trench **331** also cut **317**, forming a vertical trench, 0.5m in width and 0.5m in depth. It was aligned north-south, and ran alongside the wall of the school building, overlaying the concrete foundations of the wall. The fill (**330**) consisted of a brown-grey sand, containing moderate angular stone chippings. Deposit **317** underlay the tarmac (**300**).

3.3 Area of stripping (Figure 3)

In the area of ground level reduction, the natural subsoil (**307/319**) was overlain by a rubble dump (**336**), 0.5m in depth, and consisting of bricks, stone blocks, modern piping, concrete and tarmac fragments in a matrix of silty sand, with some crumbled mortar and lenses of redeposited natural. This was overlain by hardcore layer **317**, which underlay tarmac **300**. The tarmac layer was cut by a manhole **329**, measuring 0.95m by 1.05m, which lay along the alignment of the foul-water drain in service trench **327**.

Western Area

3.4 Western Area topsoil strip (Figure 2)

The western part of the development lay below and to the west of the school on the level land of the Rheidol floodplain. The basal deposit encountered in this area was a light brown-grey silty clay subsoil (**401**), which covered the entirety of the western area and was not fully excavated. It contained occasional sub-angular pebbles, tarmac pieces, pipe fragments from the services running through the area, and small fragments of coal, with bioturbation in the form of roots and rootlets. The deposit was cut by the north-south land drain **409**, measuring 0.2m in width, and by **404**, an irregular curvilinear pit, measuring *c.*1.6m east-west and 0.8m north-south, which again was not fully excavated. The pit contained fill **405**, a light grey-yellow soft, loose silty clay. Also cut into subsoil **401** was pit **410**, which was rectangular in plan, measuring 2m north-south by 0.4m east-west. The feature contained fill **411**, which consisted of loose dry tarmac material; small (up to *c.*0.03m) stone chippings in a black silty sand matrix.

The subsoil (**401**) was also cut by a series of ten, roughly parallel, linear features (**412**). They generally measured *c.*0.3m to 0.4m in width and between 1.2m and 2.5m in length, all aligned east-west. They were on average set between 0.4m and 0.5m apart, generally broader to the east and tapering to the west, and covered an area 4m east-west by 3m north-south. They were not fully excavated, but appeared to be quite shallow, and contained fill **413** a compacted deposit of dark purple-red sand containing frequent angular fragments of stone, tarmac, coal and substantial quantities of late Post-medieval and Modern pottery and glass.

The linear features (**412**) were truncated by service trenches **414** and **416** (**Plate 10**). Pipe trench **414** was aligned north-south and measured 0.35m in width. It was part of the same network of services as **402** and **416**. The fill of the trench (**415**), was identical material to deposit **411**, and contained pieces of the fragmented narrow red ceramic pipe that formed the service pipe. Trench **416** was also 0.35m wide and

aligned northwest-southeast, forming a junction with **414** at its southeastern end. Its fill (**417**) was identical to deposit **415**.

Pipe trench **402** also cut subsoil **401**, and was part of the same system as **414** and **416**. It formed a junction with **414** at its southwestern end, had a width of 0.35m and was aligned northeast-southwest. The fill of the trench (**403**), was identical to fills **415** and **417**. Service trench **406**, was on a roughly east-west alignment, and measured 0.35m in width and cut subsoil **401**. The fill (**407**) of the trench was again identical to **403, 415** and **417**.

Overlying subsoil **401** was a dump of tarmac material (**408**), measuring *c.*1m by *c.*0.7m, forming an irregular curvilinear shape, and containing the same loose small stone chippings in a black silty sand matrix as pipe trench fills **403, 407, 415** and **417**. It appeared to be shallow, but was not fully excavated.

Overlying all of these features was the topsoil (**400**), which covered the entire area, a mid grey-brown clay loam, measuring between 0.1m- and 0.15m in depth. The deposit contained isolated sub-rounded pebbles, brick fragments and modern ceramic building material, with frequent grass roots and rootlets.

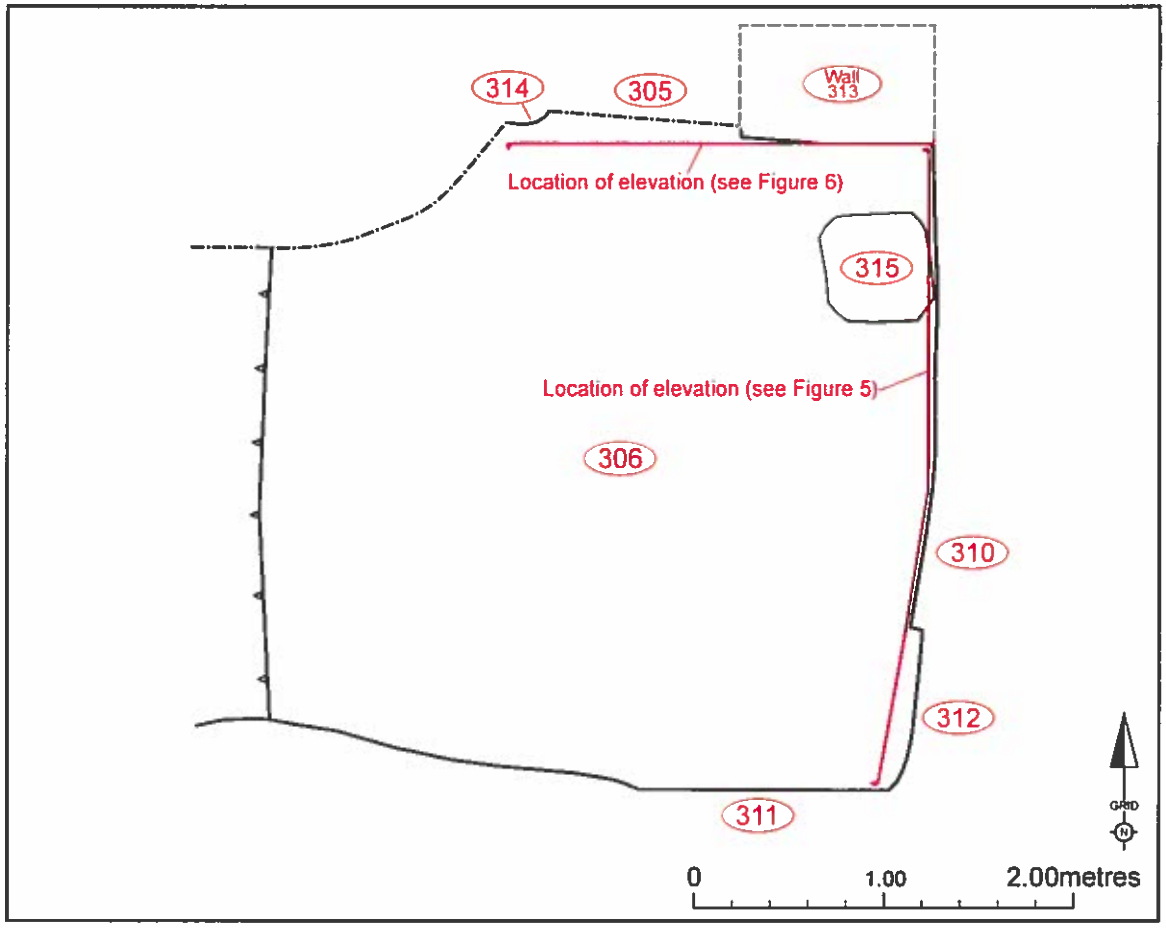

Figure 4. Detail of corridor area

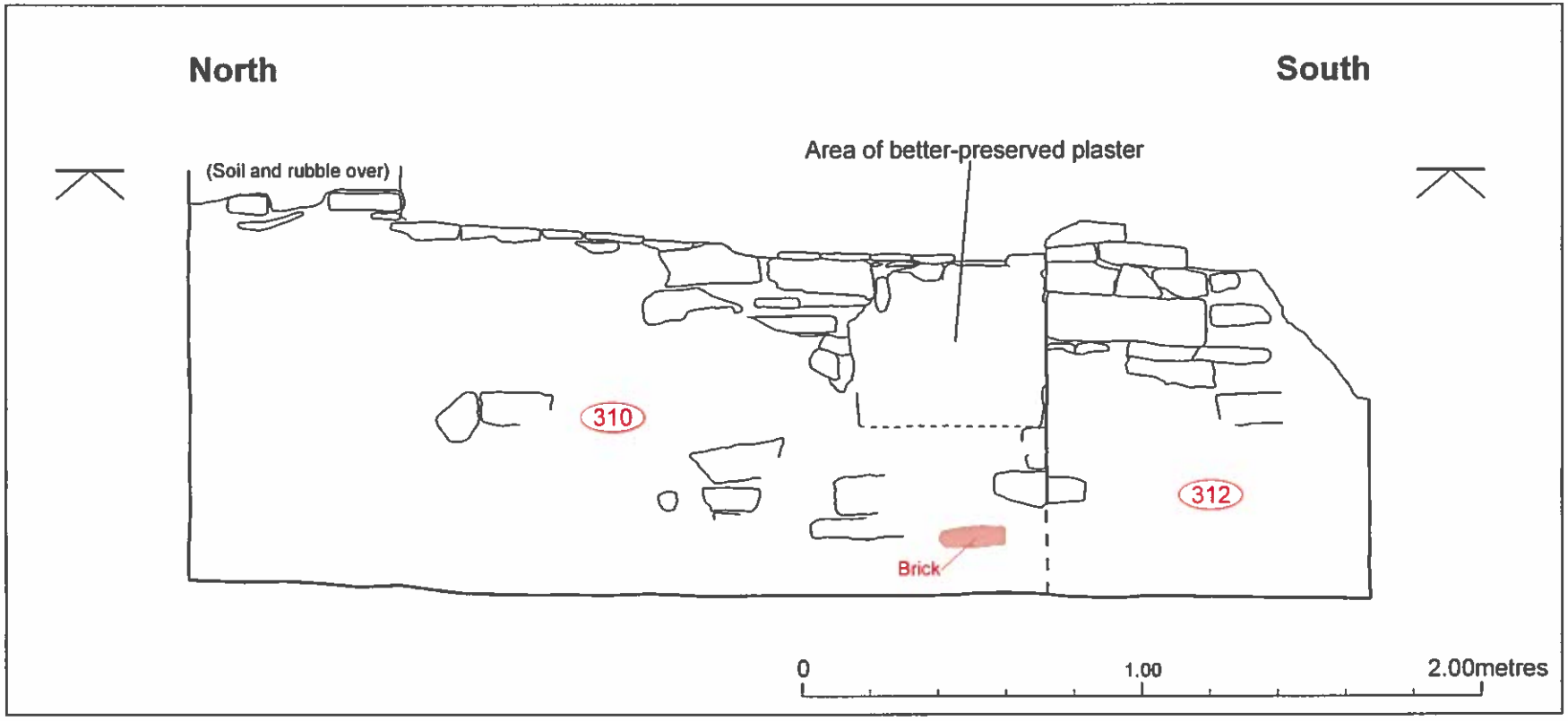

Figure 5. West-facing elevation of walls **310** and **312**

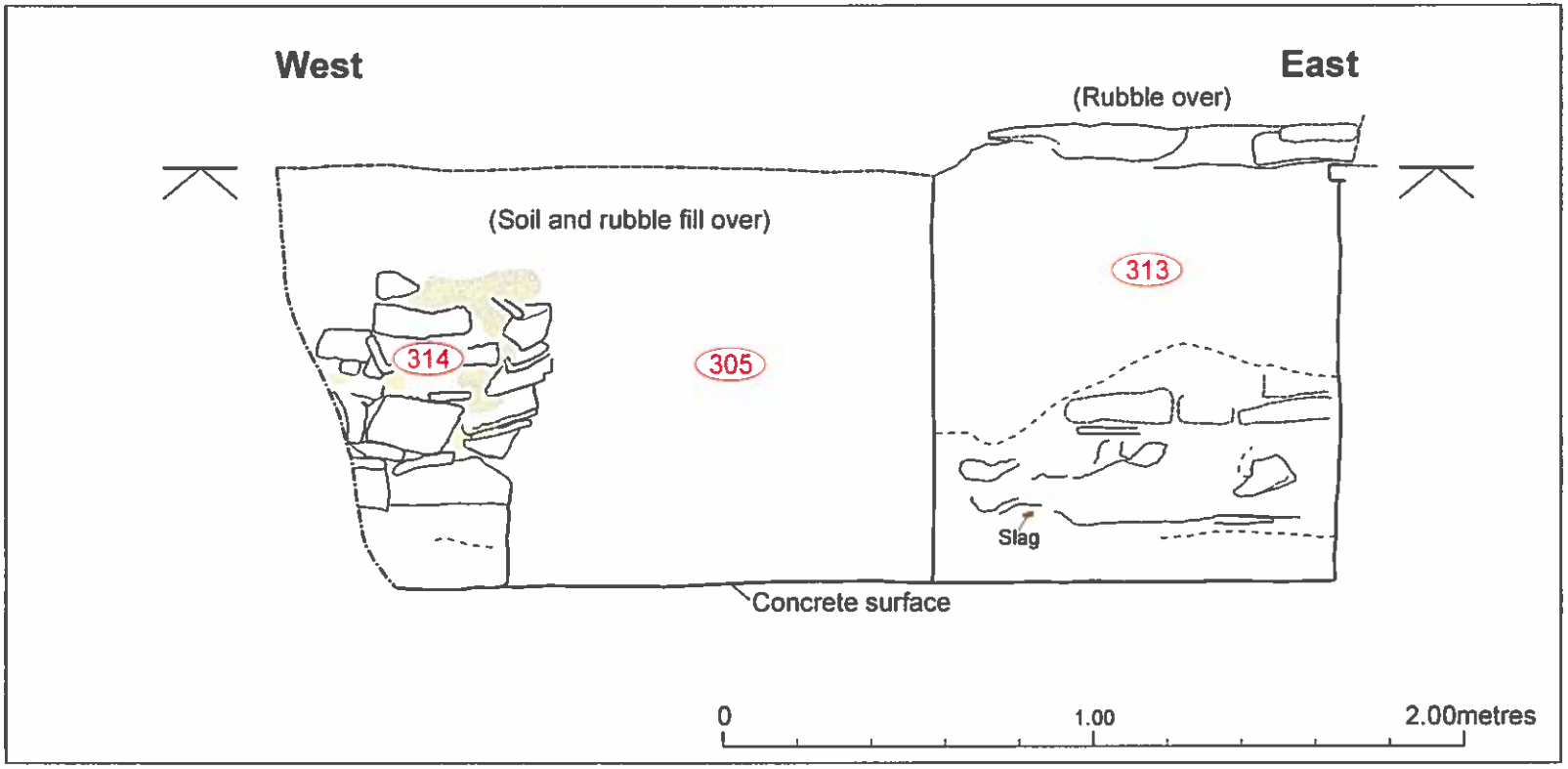

Figure 6. South-facing elevation of walls **314** and **313**

4 Finds analysis

The finds assemblage consisted of a small amount of material from eight contexts.

Dating evidence within the assemblage was provided by every context, but in no instance could a date earlier than 1850 be applicable. Modern materials included ironwork, glass (bottle, window and other) and ceramics. One context (**318**) produced food waste; within the same context were fragments of a clear glass bottle that was probably also represented in **413**, with the name TUDO[R. There were two complete bottles, with stoppers, of APEX bottles water in context **315**. One of the ceramics from context **318** bore an illegible basal mark. There was no earlier material.

The evidence is consistent with building **309** being in use until at least the middle of the 19th century, possibly later.

5 Conclusions

In the western area of the development, on the floodplain of the River Rheidol, the subsoil encountered may have been the deep, naturally occurring river alluvium, or possibly a homogenous deposit of imported soil brought in as part of the works to reclaim the marshy lands of the floodplain. Alternatively this deposit, full of midden-type material and late post-medieval/modern pottery and other finds, may represent a small area of an imported soil brought in for the terracing and reclamation of the site.

The features noted included a pit of unknown purpose, and an enigmatic series of parallel linear cuts, which may have been associated with the drainage of the site, although they appear to be very closely spaced for such purpose. The other features identified in this area were all associated with modern services; a system of small pipe trenches, a very regular rectangular pit filled with the same material as the fill of the service trenches, which is probably associated with the network of pipes, and a smear of the loose tarmac fill which probably represents a dump of excess material.

In the stripped area and Foundation Trench 1, no features of archaeological interest were encountered. The rubble deposit used as a terracing layer for the playground contained some structural stone and may have included the demolition remains of the former structures on the site. Foundation Trench 1 revealed that the natural subsoil had been truncated by the construction cut for the swimming pool.

The most significant features identified in the course of the watching brief were the structural remains found in the east area, at the corridor extension. The walls are believed to be the base of the tower which is known to have stood on the site up until the latter half of the 20th century.

The tower depicted on numerous sources from the 18th and 19th centuries (cover illustration and Figure 7) is shown with crenellations and a first-floor entrance, features that suggest it is of 12th century date. It is not known however, whether these representations are of an original tower belonging to the medieval period, or one substantially rebuilt from the ruins of an earlier structure. Indeed, it is possible that it was constructed as a folly by the Nanteos estate during the later 18th century.

The plan of the building exposed in the course of the works formed a square *c.*3.5m across, with a doorway in the middle of the north wall, and another at the south end of the east wall (later blocked up). This is consistent with the floor plan of the tower as shown on a plan of Plas Crûg farm dating to between 1870 and 1887 which details a proposed extension to the existing building (Figure 8). This plan shows a layout matching the farmstead depicted on the drawings and paintings, though the lack of a north arrow means there is no way of orientating the plan. The topography and the appearance of the surrounding landscape in the paintings, drawings and early photographs of the building, however, suggest that the tower formed the northwest corner of the building, with a long range built on to the east side, and a large building with a very substantial chimney stack, which is labelled as a stable on this plan, on the far side of the range.

The remains encountered were those of a substantial building; the one wall which it was possible to fully investigate, the east half of the north side, proved to have a width of 0.82m. This wall was faced with blocks of stone roughly squared and brought to course, with a rubble core. The construction included mortar of various different types, both at its core, and at its face, although there was also evidence of the stones at the core of the wall having been clay-bonded. The wall which formed the other half

of the north side of the building appeared to be of cruder construction than the rest of the building, suggesting that it may be of an earlier date, though the difference in appearance could have been due to the heavy disturbance caused by tree roots in the soil behind this wall. The plaster covering the face was not as well preserved as that on the other walls, possibly because of disturbance or different style of construction. The outer faces of the wall appeared to have been mortared, but again there was evidence of clay bonding at its core, suggesting that the mortar may have been from later repointing, rather than from the original construction of the wall. The north-facing doorway formed by these two walls was straight on its east side, and splayed on its west, which further suggests that these two walls may be of different dates.

Most of the walls encountered appear to be generally Post-medieval in date; with no trace of field clearance stones as might have been expected in a building of earlier date, and mostly appear to have been mortar-bonded. One, the east wall, incorporated a single brick in its construction. They appear to have all been faced with a thick layer of plaster at a later date in the building's use, as there were traces of whitewash applied directly on to the stonework, beneath the plaster.

There were no traces of the west wall, but the concrete flooring gives a likely indication of the original dimensions of the building, giving an overall internal size of 3.5m^2. It appears that the original floor surface of the building consisted of large cobbles contained in a silty clay matrix, which overlay the natural clay. This surface was apparently covered with a concrete layer later on in the building's history, presumably in an attempt to consolidate it and to provide a more stable and solid surface.

The multiple phases of use the building went through are also demonstrated by the later blocking-up of the doorway at the south end of the east wall. This blocking appears to have been earlier than either the whitewashing of the walls, or the plastering of their faces, as both are evident on the stonework of the blocking, though it may have post-dated the late 19th century proposed addition to the farmhouse, as the doorway is shown as being open on the plan which gives details the extension (Figure 8). This doorway appears to have been the only means of gaining access to the tower from the rest of the farmhouse, with the north door being the external entry point. The remainder of the farmhouse and the buildings depicted in historical documents are likely to underlie the standing school buildings.

The material culture recovered reflects the continuation of occupation of the building into the 19th and even 20th centuries.

The building then, clearly has a long history of rebuilding and remodelling, having been painted at some stage in its history, with a plaster layer added later. Several of the walls incorporate a mixture of different types of mortar, and some include traces of clay bonding at their core, suggesting an early date with some degree of later work, either repointing or rebuilding of the walls using the original materials, as well as incorporating some new ones, such as the single brick in the east wall. This extensive remodelling is also attested by the laying of a later floor surface over the original cobbles. There is a possibility that the wall forming the west half of the north side of the building is either of earlier construction, or has more of its original structure left, with less of this wall rebuilt at a later date than the other structures.

It is almost certain that these walls represent the base of the tower, with origins in the medieval or very early Post-medieval periods, as demonstrated by the clay bonding

between the stones, though there has been extensive later rebuilding, possibly for the 18th century folly, and it is not known whether the tower as depicted in the historical documents represents the building's original appearance.

Figure 7. Early 19th Century watercolour of Plas Crug, view to the northeast with the southwest corner of the tower shown circled *(reproduced by permission of Aberystwyth Museum)*

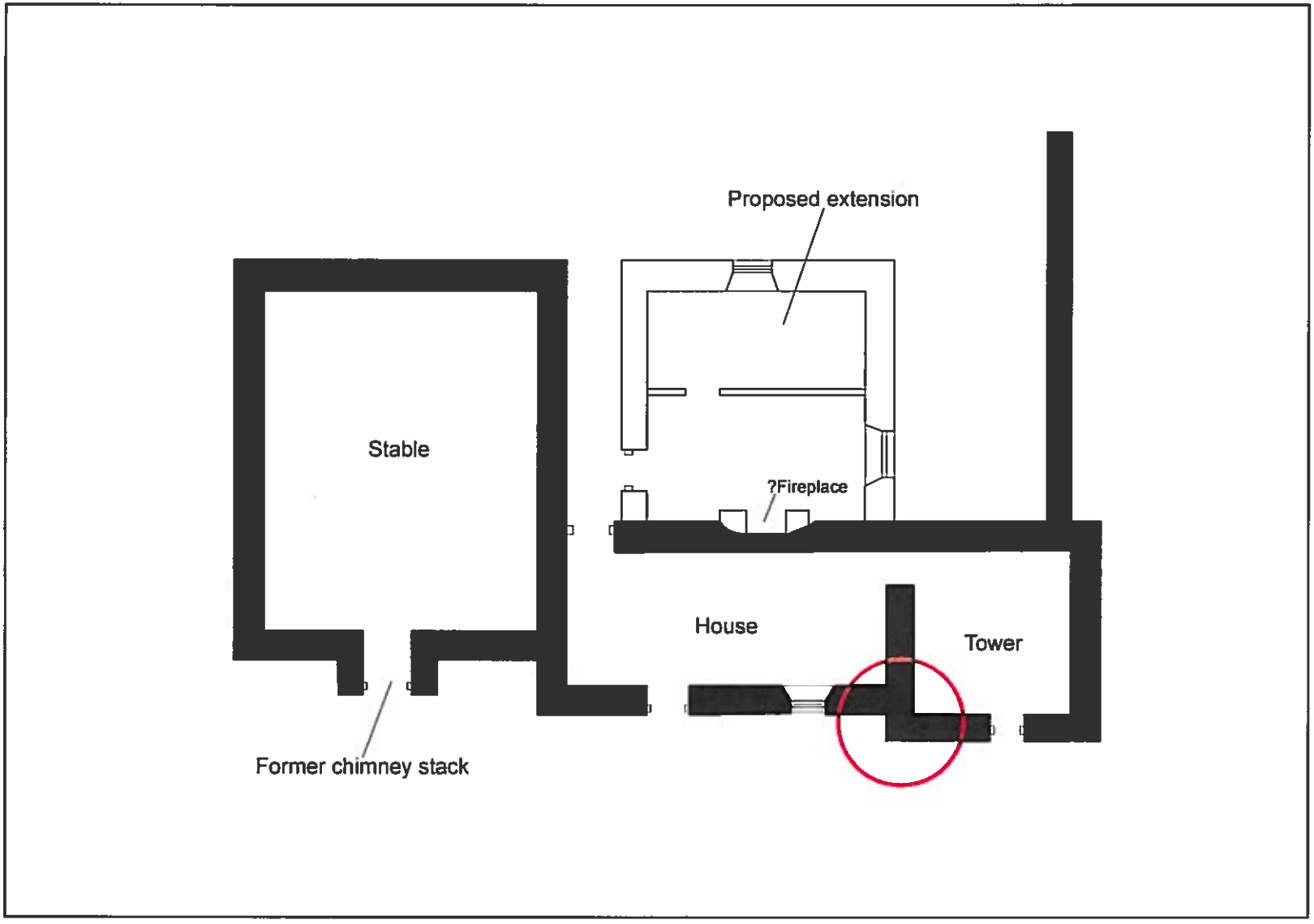

Figure 8. 19th century plan of the buildings at Plas Crûg. The southwest corner of the tower is shown circled *(based on a plan supplied by Aberystwyth Museum and used with their permission)*

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Plate 1. Concrete slab 306, cobbles 308and natural deposits, looking east ©GGAT

Plate 2. Building 309, looking east ©GGAT

Plate 3. Wall 310, looking east ©GGAT

Plate 4. Wall 311, looking south ©GGAT

Plate 5. Wall 314, infill layer 305 and wall 313, with boiler 315 to right, looking north ©GGAT

Plate 6. Wall 312, junction with 311, looking east ©GGAT

Plate 7. Boiler 315, walls 313 and 310, looking east ©GGAT

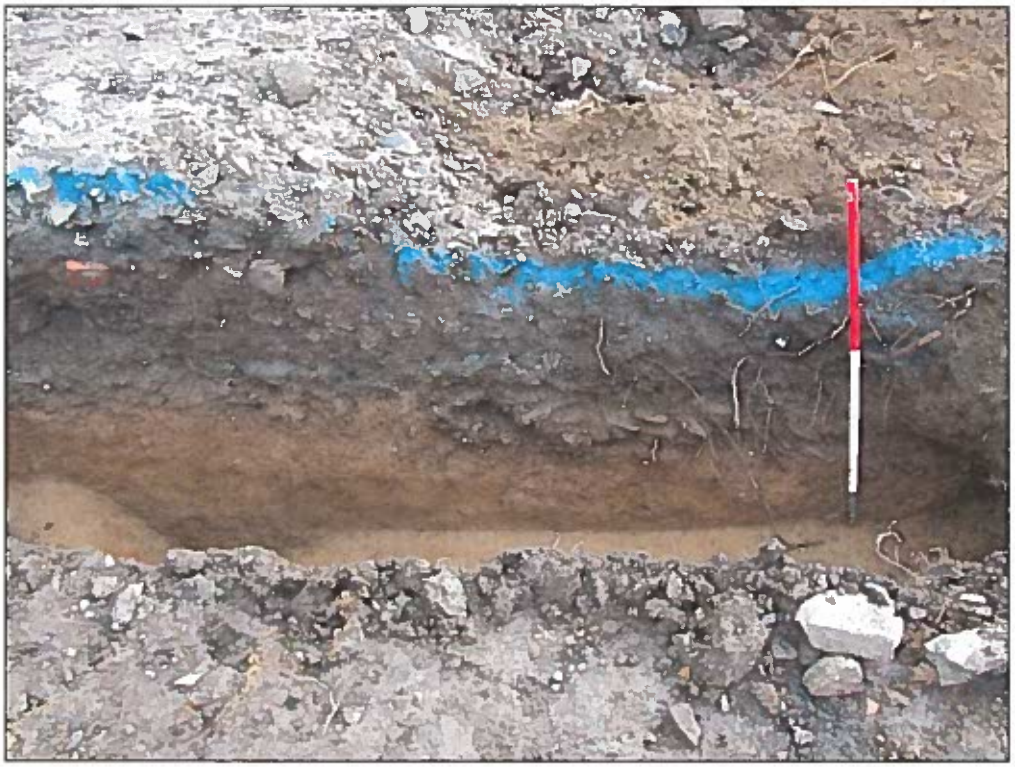

Plate 8. North-facing section of Foundation Trench 1 showing cut (332) for swimming pool and fills 333 and 334, looking south ©GGAT

Plate 9. North-facing section of foundation trench 1, showing service trenches 320, 325, 327 and 331, looking south ©GGAT

Plate 10. Western area showing features 412 and service trenches 414 and 416, upper right, looking south southwest ©GGAT

Appendix I: Context Index

Context Number	Context type	Context description	Depth below surface	Period
300	Deposit	Tarmac playground surface	0.1m-0.15m average	Modern
301	Deposit	General mixed rubble contained within a sandy matrix, laid as a make-up layer to build up the level of the verge, and as hardcore for the tarmac surface. Some of the stone may have been structural, some worked blocks appear to have traces of paint.	0.3m-0.4m	Modern
302	Deposit	Hardcore for modern tarmac path leading to side door of main school building, a thin layer of chippings in a grey sandy matrix.	0.1m deep	Modern
303	Deposit	Hardcore for tarmac surface of playground and path, thin layer if angular stone chippings within a dark grey-yellow matrix.	0.1m	Modern
304	Structure	Concrete-capped service trench aligned north-south	0.5m	Modern
305	Deposit	Building rubble in silty sand matrix. Includes plastic pipe, intact and broken bricks, modern roof tile, lumps of tarmac, concrete and mortar, worked stone blocks and slabs (appears to be local siltstone/mudstone bedrock) some with traces of paint/plaster, up to 0.7m in size. Forms a make-up layer across the site for raising the level of the verge up to the school buildings, and for terracing the site.	1.35m (varies)	Modern
306	Structure	A square concrete pad, initially thought to be the foundations of the school building or a previous building on the site, found on further investigation to be to flooring of building 309 apparently laid over the earlier cobbled floor 306 to provide a more stable, solid surface. Unexcavated and left *in situ*.	0.1m	Post-medieval
307	Deposit	Yellow-orange natural clay subsoil, containing occasional sub-rounded to sub-angular stones and pieces of ironstone 1mm-0.2m, with moderate Fe panning.	0.6m n.b	Natural
308	Deposit	Large rounded to well-rounded cobbles set on edge, contained within a matrix of grey silty clay, a single course deep; appears to have formed the original floor surface of the building 309, and later covered by concrete 306.	0.4m	Medieval/Post-medieval

309	Group	Building comprised of four walls 310, 311, 313, and 314 forming the east, south and north sides respectively. There is a former opening at the south end of 310, which has been blocked at a later date (312). The east-west aligned wall 313 terminates at a north-facing opening, and beyond this the north side of the building continues along this east-west alignment as 314. The floor of the building is formed by the concrete slab 306 which appears to be a later floor surface laid over the earlier surface formed by cobbles 308. No west wall or traces of its foundations survive; the concrete slab terminates at a distance of 3.5m from wall 310, the edge probably representing the original extent of the building. The modern walls of the school building have been built directly over the east (310) and south (311) walls. The stove/boiler 315 occupies the northeast corner of the building, and there is no trace of a chimney here. Structure 309 represents the base of the tower structure, and appears to have been rebuilt/remodelled at least once. It continued to be used up to the 20th century, but may have medieval origins (clay bonding noted in walls 314 and 313) with later mortar repointing/rebuilding of the earlier walls.		Medieval/Post-medieval
310	Structure	The east wall of building 309, roughly coursed squared stone block construction, bonded with mortar. Roughly 12 courses survive but this is difficult to ascertain as the wall is largely covered in soft crumbly plaster. Stone underneath this has been limewashed/painted; the plaster is a later addition. The uppermost surviving course appears to consist of thin stones. Stones are up to 0.3m long and 0.1m high, and there was a single brick included in the construction, near the floor. At its north end it forms a junction with the return 313 and at its south end it originally terminated in an east-facing doorway, which has now been blocked (312). The walls of the modern school building have been built directly on top of this wall, making its width impossible to ascertain.		Post-medieval?
311	Structure	East-west aligned wall forming the south side of building 309, appears to be constructed of roughly shaped stone blocks of similar dimensions to wall 310, but this is difficult to ascertain as it is largely covered in plaster. The concrete foundations of the modern school building directly overlie this wall.		Post-medieval?

312	Structure	Wall blocking the opening at the south end of wall 310, roughly coursed and constructed of roughly squared stone blocks up to 0.45m by 0.18m. It survives to approximately 12 courses, and like 310 has been covered in plaster, with a thick layer of paint beneath. The walling is slightly battered so that at the base, it is level with wall 310 but at the top is set back by 0.18m.		Post-medieval?
313	Structure	The E-W aligned return of wall 310, forming the north side of building 309. Roughly-coursed and constructed of roughly squared stone blocks, it survives to approximately 13 courses, but again this is largely obscured by plaster. The relationship between this wall and 310 is likewise hidden. Its west end terminates at an opening 1.1m wide forming a north-facing doorway; at this side the opening is straight, though it is splayed on its west side. Investigation proved this wall to be 0.82m thick, constructed of shaped facing stones (up to 0.5m by 0.3m by 0.1m) with a rubble core. It was bonded with a number of different types of mortar mixed throughout its width, though there was also evidence of clay bonding.		Medieval/ Post-medieval
314	Structure	E-W aligned continuation of wall 313 forming the north side of building 309, on the west side of the north-facing doorway. It survives to 9 courses, but the uppermost surviving courses have been heavily disturbed by tree root activity. It is roughly coursed and is constructed of stones up to 0.3m long and 0.1m high. It appears to have been plaster-covered, though its more damaged condition has also fragmented the plaster. Like the other walls, this was painted at some point. The construction of this wall appears to be rougher than that of the other walls, although this may be due to the destructive action of the tree-roots. The mortar noted in this wall's construction appears to have been a later repointing of an earlier wall, as clay bonding was found at its core, suggesting a medieval or early post-medieval date for the original construction of this wall. Where it terminates at the east end to form the north-facing opening, it appears to be slightly splayed, unlike the other side, 313, which is straight, suggesting this may be of a different date to wall 313.		Medieval/ Post-medieval

315	Object	Stove or boiler associated with an area of burning in the northeast corner of building 309, at the junction of walls 310 and 313, though there is no evidence of there having been a chimney or flue in the area. The stove/boiler itself comprises a square iron stand with rounded corners c.0.50m by 0.5m, tapering to 0.2m in height, then splaying again to 0.3m by 0.3m, though the uppermost section is badly fragmented. A large circular iron pot 0.6m in diameter sat on top of the stove; it was also damaged and fragmented. The circular lid of the pot, of iron and wood, was found next to the main part. It had an iron loop on top, and a circular hole filled with a metal mesh. This appears to be been a pot-bellied stove, which contained firebricks. The door faced towards wall 313, indicating that it had been moved, though the burning indicates that it had been used in this location.		Post-medieval, C19th
316	Deposit	Topsoil of the grassy bank leading from the playground up to the more elevated position of the school buildings. Possibly imported to form the bank following the school's construction.	up to 0.4m	Modern
317	Deposit	Stone chippings in a sandy matrix laid as an upper hardcore for the tarmac surface of the playground.	0.2m deep	Modern
318	Deposit	Rubble layer laid as lower hardcore for the tarmac playground surface.	0.5m	Modern
319	Deposit	Yellow-orange silty clay natural subsoil.	0.3m nb	Natural
320	Negative feature -	Small north-south aligned shallow trench cut for modern electricity cable.	0.15m	Modern
321	Deposit	Redeposited natural used as fill of service trench 320.	0.15m	Modern
322	Structure	Swimming pool constructed as part of the school during the late 20th century, backfilled and closed. Breezeblock construction. A walkway c.1.5m wide runs along the E, N and S sides of the pool.	1m	Modern
323	Deposit	Shale backfill of pool 322, fragmented pieces of shale and siltstone, similar to the bedrock occurring on the site.	1m	Modern
324	Deposit	Concrete capping layer covering shale backfill of the former swimming pool and walkways.	*c*.0.2m	Modern
325	Negative feature -	Service trench for a modern water pipe	0.8m	Modern
326	Deposit	Backfill of modern water pipe trench, consisting of chippings and shale in a grey silty sand matrix.	0.8m	Modern
327	Negative feature - cut	Service trench for a foul-water drain running N-S parallel with the wall of the standing school building; connects to manhole 329 and with a drainage pipe running from the school building.	0.7m	Modern

328	Deposit	Backfill of service trench 327; includes some redeposited natural.	0.7m	Modern
329	Structure	Modern manhole connecting to foul-water drain 327.		Modern
330	Deposit	Backfill of water pipe trench consisting of stone chippings in a brown-grey sandy matrix.	0.5m	Modern
331	Negative feature - cut	Roughly straight-sided cut for water pipe trench going down to the top of the concrete foundations for the wall of the main school building. Runs parallel with and directly up against the school wall.	0.5m	Modern
332	Negative feature - cut	Straight-sided construction cut for the late 20th century swimming pool. The cut is stepped out on the east side.	1.2m deep	Modern
333	Deposit	Primary fill for construction cut of pool, loose dark sandy silt with a high quantity of small stone chippings and slabs of shale 1mm-60mm.	0.25m	Modern
334	Deposit	Upper fill of cut 332, brown-grey clay loam incorporating some redeposited natural, containing moderate angular to sub-rounded stones and pieces of shale.	0.3m (truncated)	Modern
335	Deposit	Modern concrete path and kerbing running parallel with and alongside the north-south aligned east wall of the former pool building, consisting of concrete slabs *c*.0.50m square.	0.1m	Modern
336	Deposit	Very mixed deposit of rubble: bricks, stone, ceramic building material, tarmac lumps, contained within mixed silty sand, with crumbled mortar and lenses of redeposited natural.	0.5m	Modern
337	Deposit	Make-up layer of rubble, terracing area for playground.	0.5m	Modern
338	Deposit	Make-up layer terracing site and levelling area for playground, consisting of a dark grey-brown silty clay containing moderate shale and angular stone.	0.26m	Modern
339	Deposit	A layer of shale fragments, apparently very similar to the natural bedrock on the site, which lies horizontally, contained within a yellow and grey clay matrix.	0.17m	Modern?
340	Structure	Modern brick wall aligned N-S, forming the base of the east side of the former swimming pool building.		Modern
400	Deposit	Turf and topsoil	0.1m-0.15m	Modern
401	Deposit	Soft, loose silty clay subsoil, alluvial deposit on river floodplain or imported soil for reclamation? Isolated mixed coarse components, including sub-angular pebbles, tarmac pieces, pipe fragments, coal fragments (0.01m-0.06m).	nb	Modern
402	Negative feature - cut	Service trench aligned NE-SW; pipe appears fragmented, suggesting that services here are now defunct? Part of same network as 414 and 416, both join this trench.	not excavated	Modern

403	Deposit	Fill of 402 consisting of a loose, dry tarmac material formed of angular to sub-angular chippings with fragments of ceramic pipe contained in black silty sand matrix	not excavated	Modern
404	Negative feature -	Pit feature cut into subsoil 401, with an irregular rectangular shape in plan.	not excavated	Modern?
405	Deposit	Soft, loose, friable light grey-yellow silty clay, fill of pit 404 with coarse components of isolated angular to sub-rounded pebbles, coal, and tarmac pieces (<1mm-10mm).	not excavated	Modern?
406	Negative feature - cut	Modern pipe/service trench aligned roughly E-W. Pipe is fragmented, suggesting that services here are now defunct	not excavated	Modern
407	Deposit	Fill of406, as 403.	not excavated	Modern
408	Deposit	Dump of dry loose tarmac material consisting of angular to sub-angular stone chippings contained within a black silty sand matrix, identical to pipe trench fills 403, 415, 417. Probably represents dumped excess fill material associated with the excavation of the pipe trenches.	not excavated	Modern
409	Negative feature -	Land drain aligned N-S.		Modern
410	Negative feature - cut	Regular, straight-sided rectangular pit cut into the subsoil 401, possibly related to the service trenches, adjacent to the junction of 414 and 416 and filled with the same material.	not excavated	Modern
411	Deposit	Fill of 410, as 403.	not excavated	Modern
412	Negative feature - cut	A group of 10 roughly linear parallel cuts aligned E-W, broader to the east and tapering to the west, average 0.4m-0.5m apart, covering an area 4m E-W by 3m N-S, generally c0.3-0.4m wide and between 1 and 2m long. Not excavated but appear to be quite shallow. Unknown purpose, possibly for drainage? Or a smear of dumped imported topsoil for the reclamation and terracing of the site?	not excavated	Modern
413	Deposit	Fill of each cut of 412; very mixed compacted fill containing large quantities of Post-medieval and modern ceramics and glass and frequent angular to very angular stone contained within a matrix of very coarse, grainy sand.	not excavated	Modern
414	Negative feature - cut	Cut for a pipe trench running N-S, part of the same network as 402 and 416, as both these are connected to this trench.	not excavated	Modern
415	Deposit	Fill of 414, as 403.	not excavated	Modern
416	Negative feature - cut	Pipe trench, part of the same network as 402 and 414, joins with 414 at its SE end.	not excavated	Modern
417	Deposit	Fill of 416, as 403.	not excavated	Modern

n.b. – not bottomed

Appendix II: Finds Index

Context	Material type	Description	Qty	Weight	Period
U/s	Tile	Wall tile	1	0.043	Modern
305	Iron	Nail concreted with mortar	1	0.025	Modern?
	Glass	Bottle, beer and Codd's fragments	2	0.019	C19/20
		Window	1	0.018	Modern
		Mirror	1	0.004	Modern
	Plaster	Painted fragments with render	2	0.008	Modern?
	Pottery	WETP	1	0.003	C19?
		WE misc	1	0.005	C19?
		Modern ceramics (teapot)	1	0.008	Modern
315	Iron	Cast iron fragments, perhaps from boiler ('10 galls')	5	1.238	Modern?
		Nail 6"	1	0.040	Modern?
		Spike (rectangular section)	1	0.075	C19?
	Cu alloy	Spoon, salad type	1	0.068	C19?
	Glass	Bottles (clear, water, 'APEX')	2	1.474	C20
318	Bone	Animal bone including fragments	6	0.038	Unknown
	Glass	Bottle, clear. *cf* 413	2	0.012	C19/20
	Pottery	Modern ceramics including manufacturer's stamp	5(?4)	0.038	C19/20
400	Glass	Bottle	1	0.015	Modern
		Window	2	0.005	Modern
	Pottery	Modern stoneware	1	0.022	C19
		Modern ceramics	8	0.023	C19/20
405	Glass	Window	1	<0.002	Modern
407	Pottery	WETP	1	<0.002	C19?
413	Glass	Rod ?from insulator/distilling apparatus	1	0.020	Modern
		Bottle (2=1) *cf* 318 'TUDO{R'	1	0.003	Modern
		Window, ribbed	1	0.002	C20
	Pottery	Modern ceramics	4	0.059	C19/20

Abbreviations

WE misc	white earthenware, plain (various, mostly C19 or later)
WETP	white earthenware, transfer printed

Appendix III: Mortar analysis, by Martin Locock BA MIFA

Introduction

Seven samples of mortar were recovered from four contexts (**310**, **312**, **313**, and **314**), the samples submitted were examined visually and tested for hardness.

Catalogue

Context **310** sample ***001**	Hard grey lime mortar with lime lumps
Context **310** sample ***002**	Hard grey lime mortar with coal and stone inclusions
Context **312** sample ***005**	Hard grey lime mortar with coal and stone inclusions
Context **313** sample ***006a**	Soft dark brown earthen mortar
Context **313** sample ***006b**	Hard grey lime mortar with coal and stone inclusions
Context **314** sample ***003**	Moderately hard dark grey/blue lime mortar
Context **314** sample ***004**	Moderately hard pale grey lime mortar with occasional coal fragments

Conclusion

The only sample of possible pre-1700 character was ***006a**. The remainder are clearly of late 18th century or later character; sample ***003** is characteristic of 19th century.

Sample ***001**, from context **310** (part of structure **309**) is similar to mortar recovered from context **305**, a general make-up layer consisting of demolition material, and may therefore provide a link between building **309**, of which **310** is a part, and the demolition deposit.

Plas Crûg Primary School, Aberystwyth, Ceredigion: archaeological watching brief

REPORT NUMBER 2010/054

March 2011

Report prepared by S H Sell

Position Project Officer

Signature Date 08/03/2011

Report issue authorised by Richard Lewis

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Signature Date 09/03/2011

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

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