WEST ANGLE BAY
ANGLE, PEMBROKESHIRE:
ARFORDIR EXCAVATION 2010

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SUMMARY

The site of St. Anthony's Chapel at West Angle Bay has been the focus of two previous archaeological investigations in 2005 and 2006, both aiming to inform decisions on the future management of the site, brought about by the continuing erosion of human burials from the cliff face.

In 2008, further geophysical survey was undertaken to establish the full extent of the site. This survey added considerably to our understanding of the archaeology of the area, but also served to highlight several aspects of the site that warranted further clarification.

The 2010 excavations at West Angle Bay were undertaken as part of the Arfordir Coastal Heritage project. The main aim of the investigations was to provide more information on the date, character, significance, and state of preservation of the archaeology within the northern part of the scheduled area, which is considered to be under the most immediate threat of coastal erosion. The project also provided an opportunity to test the hypothesis that there may have been a Roman military presence at the site.

Three trenches were excavated as close to the cliff edge as was practical and safe. A single cist burial was identified within Trench 1, the most westerly of the three trenches. A possible palisade ditch was excavated on the eastern edge of the site, within Trench 3. Part of a possible corn dryer was also excavated within this trench. A variety of other features investigated may suggest occupation within the enclosure. A possible natural pond or palaeochannel was investigated within the centrally located Trench 2. Mesolithic microliths were recovered from its basal fill. Radiocarbon dating indicates that the eastern annexe of the rectangular enclosure was falling into disuse during the 8th century. Overall the investigations have provided evidence to suggest that a large early medieval rectangular enclosure was present, within which was a cemetery, probable timber buildings and agricultural processing was carried out. The enclosure ditch may have seated a palisade indicating the site was defended.

The results of the investigations have indicated that although there are significant archaeological features within the area defined by the rectangular enclosure ditch, they do not appear to be widespread or densely packed. Apart from the burials, no features of sufficient importance to warrant immediate archaeological mitigation were identified in the trenches.

Although the small scale investigations undertaken at the site so far have increased our understanding of the site considerably, they have also demonstrated that small investigations undertaken on the grounds of threat related assessment do not necessarily involve the same focus and scale of excavation that would need to be undertaken to answer wider research questions.

To gain a better understanding of the development of the site, further relatively large scale, open area excavation would be required. Such excavation would need to be research led and focussed on specific areas not necessarily under immediate threat from coastal erosion.

1. INTRODUCTION

1.1 Background

The site of St. Anthony's Chapel at West Angle Bay lies within the Pembrokeshire Coast National Park at NGR SM 8515 0305. The site has been the focus of two previous archaeological investigations in 2005 and 2006, both aiming to inform decisions on the future management of the site, brought about by the continuing erosion of human burials from the cliff face. Geophysical Survey also enabled the extent of archaeological features to be further defined. These projects have provided significant evidence regarding the date and character of the site and as a result the site has been recognised as being of national archaeological importance, and was subsequently scheduled in January 2010 (Scheduled Ancient Monument No. PE554).

In 2005, the excavation objectives were to ascertain the presence and extent of burials or other features that might be at risk from coastal erosion (Ludlow 2005). At the time, a geophysical survey of the area was unavailable, so hand dug test pits were located at random along the cliff top. In 2006, following a successful geophysical survey (Heard 2006), targeted trenching was undertaken to sample specific features and to further clarify the findings of the previous season (Schlee 2006).

In 2008, further geophysical survey was undertaken to establish the full extent of the site (Smalley 2008). This survey added considerably to our understanding, but also served to highlight several aspects of the site that warranted further clarification.

The last remnants of a severely eroded promontory fort have recently been identified directly to the west of the site. This evidence of prehistoric settlement suggests that this has been a significant location for a considerable time. A large rectangular enclosure indicated by the geophysical survey, may have provided a focal point for the establishment of the early medieval cemetery and (later?) chapel.

1.2 Coastal erosion

Monitoring of the erosion of the cliffs at West Angle Bay has demonstrated that since 1996 at least one entire cist grave has been gradually exposed and lost, the last remnants eventually falling from the cliff in January 2010. Two further eroding cist graves have been identified.

The pattern of erosion in this area is determined by the underlying hard shale rock strata which lie close to vertical, and are overlain by weathered bedrock and softer glacially derived clays. The angle of the bedrock strata has the effect of directing waves along faults and exposed deposits of softer geology, as well as creating the easiest flow for ground water. The surrounding harder geology survives, and effectively funnels the wave action and ground water, further increasing the rate of erosion of the softer deposits. This is very evident in the area of the exposed cist graves, and also at the western end of the bay where small headlands of harder shale have been left projecting into the sea, with small bays with near vertical cliffs in between. This is the location where the last vestiges of a promontory fort have been identified, almost all of which has been lost to erosion, excluding two small stretches of two defensive banks and a ditch.

In addition to the erosion processes described above, both waves and winds are directed up the cliff face. This undercuts the turf covering, exposing the shales and soils overlying the solid geology and preventing regrowth of the turf that would stabilise and protect these deposits. With the gradual loss of the overlying deposits, the underlying geology is exposed to water penetration, eventually

resulting in further erosion.

With climate change and the predicted increases in sea levels, the speed of erosion of the West Angle cemetery site will increase. From our present knowledge, this is likely to follow the softer geological strata through a strip along the northern part of the scheduled area (see figure 4). The archaeological remains within the topsoil above the harder shale rocks will erode much quicker once the surrounding softer geology has been eroded.

Other erosion from ploughing has been addressed in previous reports. The field in which the site is located is currently subject to a Tir Gofal agri-environment agreement and is cropped for hay. The main part of the field has, in the recent past, been used primarily for grazing, but has apparently been ploughed for root crops during the earlier part of the 20th century. The Pembrokeshire Coastal Path has been diverted to avoid the Scheduled site, although the area is still accessible to walkers.

1.3 Arfordir and outreach

The 2010 excavations were undertaken as part of the Arfordir Coastal Heritage project. This provided local Arfordir participants, Angle Heritage Group members and other volunteers with an opportunity for active engagement in the discovery of their local heritage and a variety of other learning outcomes. The opportunity to develop new skills will hopefully encourage continuing involvement in, and development of the project.

The investigations provided Arfordir volunteers (including those from Angle Heritage Group who have been monitoring the significant new erosion to the cist burials over the last winter, and others who have been active in monitoring the effects of erosion on coastal archaeological sites), with more information about the project and archaeological techniques. The project has also provided opportunities for other volunteers to learn about the Arfordir project, thus enhancing the value of the community input.

The location of the excavation meant that many visitors to the beach, coastal path walkers and locals came to visit the investigations. Time was taken throughout the project to give tours of the trenches and explain the reasons for and circumstances of the excavations. The site was also visited by the local school.

The excavation has been followed up by a community exhibition at the Angle Heritage Day (29/08/2010), and other events are likely.

2. THE SITE

2.1 Location, Topography and Geology

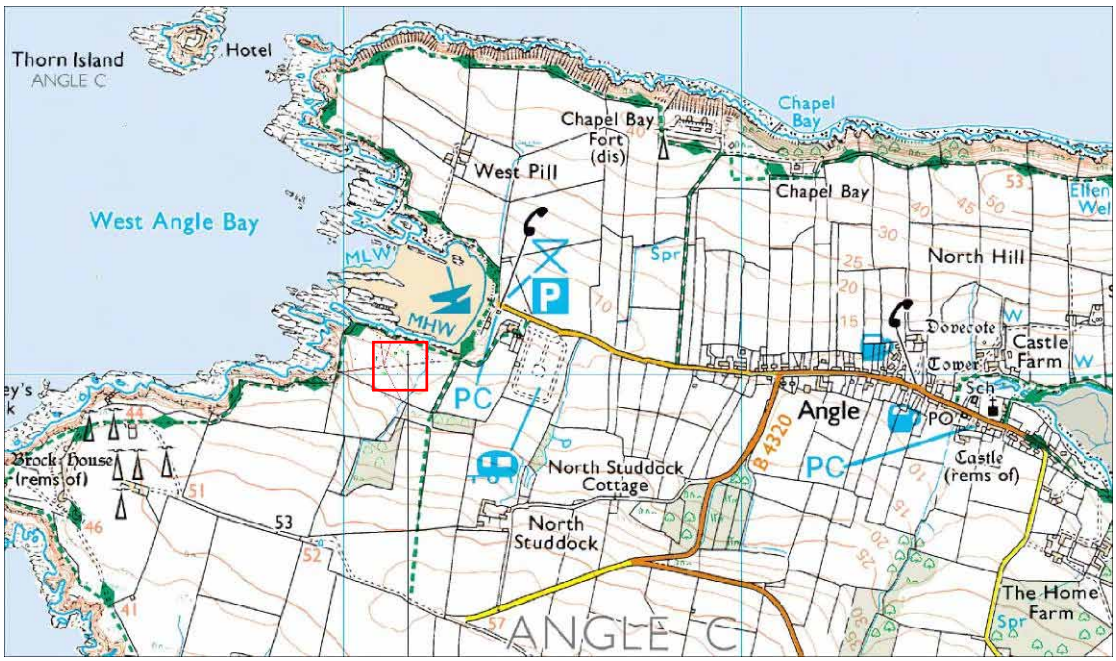

Figure 1: Location map, based on the Ordnance Survey.

The Anglo-Norman planned settlement of Angle was established by the late 12th century. The village has a characteristic central street with narrow plots running off at right angles, a concentration of high-status Medieval buildings at the east end of the village, and a surrounding landscape of fossilized strip fields (James 2000).

The St Anthony's Chapel site at West Angle Bay, one of 38 known or possible early medieval cemetery sites in Pembrokeshire, lies approximately one mile west of the village, within a large, rectangular field that slopes gently downhill to the top of the coastal cliffs that form its northern limit.

The cliffs at West Angle Bay are a SSSI, (32WWH) because they provide a section through Pleistocene deposits, making it one of the most important geological sites of this type in Wales. Although West Angle Bay is underlain by Carboniferous Limestone the excavation site itself is underlain by mudstones, siltstones, sandstones and conglomerates. Quaternary clay deposits occur to the east of the site. These clay deposits provided 'brickearth' for a brickworks formerly located to the east of the site, of which part of an old chimney are the only visible remains.

The site was made a Scheduled Ancient Monument (SAM) by Cadw in January 2010 (SAM PE554). The scheduled area covers the entire rectangular enclosure as revealed by the geophysical surveys. A thin finger of land at the far northwestern extremity of the site at NGR SM 8502 0312 was also included as part of the scheduling, in the belief that the area contained evidence of further burials. It is no longer considered to be the case.

2.2 Archaeological and historical background

In his Historical Tour through Pembrokeshire of 1811, Fenton writes '… to the west of the village in a field, to this day called Church Field, may clearly be traced the site of a chapel, or probably the original church, before the present was erected, called St. Mary's, as having a large cemetery extending to the shore below it, on who's shivery banks that bounded it, as they are gradually washed away by the tide, graves and stone coffins appear.' (Fenton 1811).

Laws and Owen in their 1908 Pembrokeshire Archaeological Survey, reported that the field contained a circular bank, standing about two feet high that enclosed the burial ground and that part of the compound was divided off by a wall or stone-faced bank (James 1997). Elsewhere, however (see below), a remarkably similar description is attributed to the St. Mary's Chapel site, to the north of Angle village.

The RCAHMW Inventory for Pembrokeshire (1925) suggests (with reference to Dr Henry Owen) that a chapel, dedicated to St Anthony was once present at Angle but was destroyed by coastal erosion some time before 1500. This suggestion is based on the wording of a will of one Richard Newton in 1500 (RCAHM 1925, entry no. 26) which bequeaths 'to the chapel of St George the Martyr of the Nangell four tenements in Haverfordwest and Pembroke, which lands of late appertained to the Chapel of St Anthony in the Nangle, and to the augmentation of the stipend of a priest always to sing for the souls of the founders of St Anthony, that is to say Edmonde Shelborn and his ancestors…'.

The RCAHM Pembrokeshire Inventory description (entry 26) does not mention the earthwork enclosure at West Angle Bay. The description of St Mary's Chapel (entry no. 27), however, appears to be remarkably similar to the Laws and Owen description of the West Angle Bay site, perhaps suggesting that somewhere along the line, the two sites have become confused.

An aerial photograph from the 1950s shows part of the cemetery compound surviving as an extant feature, remarkably similar to the Laws and Owen description. An Ordnance Survey Field Inspectors description of the site at West Angle Bay in 1965, reports 'a small, near circular enclosure….raised on the north side, while the remainder is defined by a low spread bank' (Regional HER). Agricultural activity since then has obliterated almost all surface evidence of this.

St. George's Chapel is presumed to be the small 15th century building, sited within the churchyard of St Mary's church. The chapel, now known as the 'Fisherman's Chapel' or 'Sailor's Chapel', also bears an inscription above the door, reading 'This chapel is dedicated to St Anthony and was founded by Edward de Shirburn of Nangle AD1447', although the inscription is not itself of that date. The chapel of St George would therefore appear to have been re-dedicated to St Anthony. A note in the Pembrokeshire Inventory, however, quotes Glynne (Arch Camb, 1888, V, v 122) concerning the possibility that St. Georges Chapel was actually located inside St. Mary's Church itself.

To summarise, although there may have been a chapel at West Angle Bay, there is no direct evidence that the surviving cemetery compound is the chapel site, or that the chapel was dedicated to St Anthony. It is of course also possible that it is both, or that the cemetery compound is only part of a larger group of buildings, the actual chapel dedicated to St. Anthony having indeed been lost to coastal erosion. There is no recorded dedication to a Celtic saint at the site.

2.3 Geophysical survey

Geophysical surveys undertaken by Stratascan Ltd in 2006 and 2008 have established the full extent of the site (Heard 2006; Smalley 2008). The results (figure 2) show the outline of a large rectangular enclosure with two rounded corners surviving on the south side. The north edge of the enclosure has been lost to erosion. How much land has been lost since the enclosure was first created is unknown, but it is tempting to assume that the enclosure was originally square. Within this enclosure there is a smaller, oval enclosure containing a possible rectangular building. On the east side of the site, a second linear feature is suggestive of an annexe to the main enclosure.

2.4 Previous excavations

The West Angle Bay site is currently considered to be a 'developed' early medieval cemetery with a later chapel built in the same location. This has not, however, been proved by archaeological excavation. The cemetery lies within the larger rectangular enclosure.

In 2006 part of the rectangular enclosure was excavated, revealing a roughly v-shaped ditch 2.60m wide and 1.50m deep, and with a level base. No surviving evidence for a bank on the inside of the ditch was apparent.

An AMS date of AD 540 to 650 (2 sigma calibrated) was obtained from the basal fill of the enclosure ditch. The enclosure ditch may well have earlier origins since the presence of emmer and spelt glume wheats in the ditch fill may be evidence of earlier activity at the site.

Three cist burials have been recorded eroding from the cliff-edge within the rectangular enclosure area. All three burials were east-west oriented cist graves, with evidence of side-slabs and lintel-slabs, but no basal slabs. A single AMS date obtained from this burial group was AD 650 to 780 (2 sigma calibrated). This suggests that this burial group post dates, but is contained within, the rectilinear enclosure ditch.

Also within this enclosure, is an egg-shaped oval cemetery compound defined by a stone-faced boundary bank and external ditch. The compound encloses an area of approximately 400 square metres. At its narrow (northeast) end, geophysical evidence may indicate a rectangular east-west aligned building, approximately 5m by 6m (see figure 2), although this has not been confirmed by excavation. AMS dating and the analysis of plant remains from the ditch suggest that it is of early medieval origin.

There was evidence of numerous burials within this oval compound. These were primarily infant burials. AMS dating of the excavated burials ranges between AD 720 and 1020 (at 2 sigma calibration). More deeply stratified burials (as yet unexcavated) might provide earlier dates. The excavated evidence suggests that no burials were truncated by construction of the compound and that therefore it is logical to think that all the burials in this group post-date the initial construction of the cemetery compound.

The nature of the possible rectangular building within the cemetery compound is unknown. On the assumption that it is of stone construction, it is generally assumed to be a chapel of post-conquest medieval origin. Burial at West Angle Bay would be unlikely once sole burial rights were exercised by the church of St Mary's at Angle (Ludlow 2005a) following the establishment of the planned settlement by the late 12th century. The chapel at West Angle Bay would therefore appear to post-date the use of the cemetery for burial, but was presumably constructed while a tradition of sanctity was still attached to the site. There is no excavated evidence to suggest later medieval burial at the site. Later

burials may never-the-less exist in the unexcavated parts of the cemetery compound.

In plan, the form of the rectangular enclosure and its possible annexe has some characteristics that raise the intriguing possibility that the site was originally constructed as a Roman military camp. The curved corners are typical of Roman defensive ditches constructed during the first campaign in Wales. The addition of an annexe is also typical of military camps that were re-used in the second military campaign. Annexes of this period often have more angular corners (as appears to be the case at Angle).

If proven to be a Roman military camp, the site would represent the most westerly evidence of a Roman military presence in Wales so far discovered, and emphasising the importance of coastal transport to this presence. It would also be a good example of the re-use of Roman military sites as foci for early medieval cemetery and chapel sites, as has been suggested elsewhere (Edwards and Lane 2008, p 7).

3. PROJECT DESCRIPTION

3.1 Project aims

As part of the Arfordir Coastal Heritage project, the main aim of the investigations in 2010 was to provide more information on the date, character, significance, and state of preservation of the archaeology within the northern part of the scheduled area, which is considered to be under the most immediate threat of coastal erosion.

Bearing in mind the questions raised by the previous seasons of excavation, several more specific archaeological aims that might be addressed by the investigations were identified, including:

> What is the construction date of the rectangular outer enclosure?
>
> What is the relationship and chronology of the annexe at the eastern end of the site to the other features?
>
> Are further burials present between the cist graves eroding from the cliff and the oval cemetery?

The results would hopefully progress understanding of the site, and the Early Medieval period in Pembrokeshire and more widely, Wales. The results would also enable better targeting of any future mitigation or research excavations into the Early Medieval period informed by the Welsh Archaeological Research Framework.

As the site is now designated as a Scheduled Ancient Monument, Consent was applied for and granted prior to the works commencing. The site also lies within the SSSI as mentioned above, and consent was granted prior to the commencement of the work.

3.2 Methodology

Three trenches were excavated by machine using a toothless grading bucket to reveal the upper levels of any archaeological remains, or natural subsoils. Trenches were located as close to the cliff edge as was practical and safe.

Trench 1 was located to the southeast of the cist graves eroding from the cliff edge, to ascertain if any other burials are located within this area, and to look for evidence of other features within the enclosure. No specific features were discernable in this location from the geophysical survey evidence.

Trench 2 was located to the east of the oval cemetery enclosure to ascertain the nature of the anomalies identified on the geophysical survey. Such an area might be expected to contain further burials, evidence of settlement or other activities that may have occurred within the enclosure.

Trench 3 was located to sample two probable ditches at the eastern end of the outer enclosure which were identified from the geophysical survey. These ditches define a possible annexe to the main rectangular enclosure. The aim was to recover dating evidence for the features and evidence of the function of the possible annexe.

The trenches were hand cleaned and any archaeological remains were sample excavated using hand tools (mattocks, shovels, trowels etc). All trenches and features were planned, photographed, recorded and surveyed.

Finds, carbon dating samples and bulk soil samples were taken for subsequent processing and analysis.

Numerous volunteers assisted with the excavations.

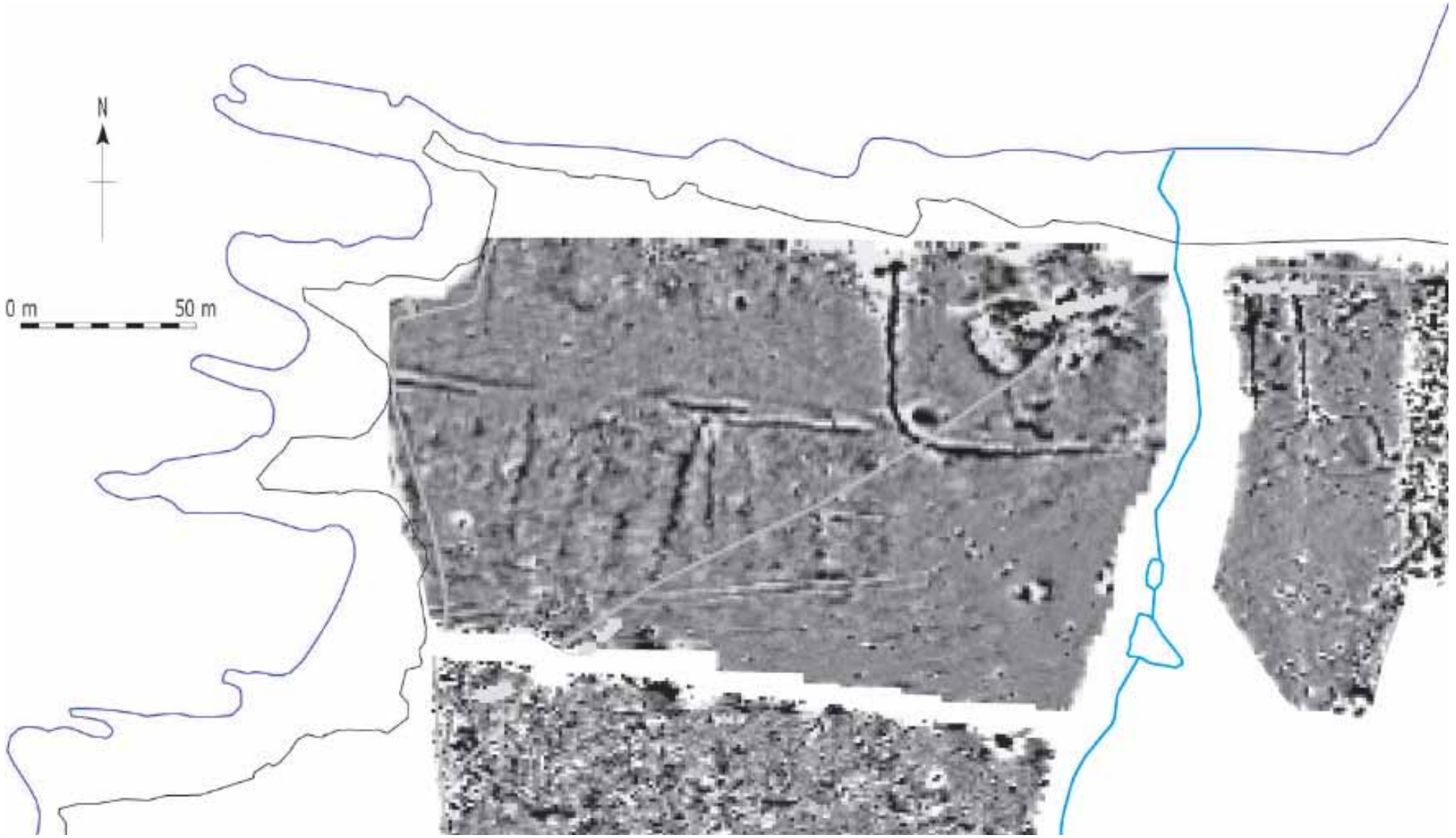

Figure 2: The geophysical survey, showing the rectangular enclosure and oval cemetery compound (based on results from Heard 2006 and Smalley 2008).

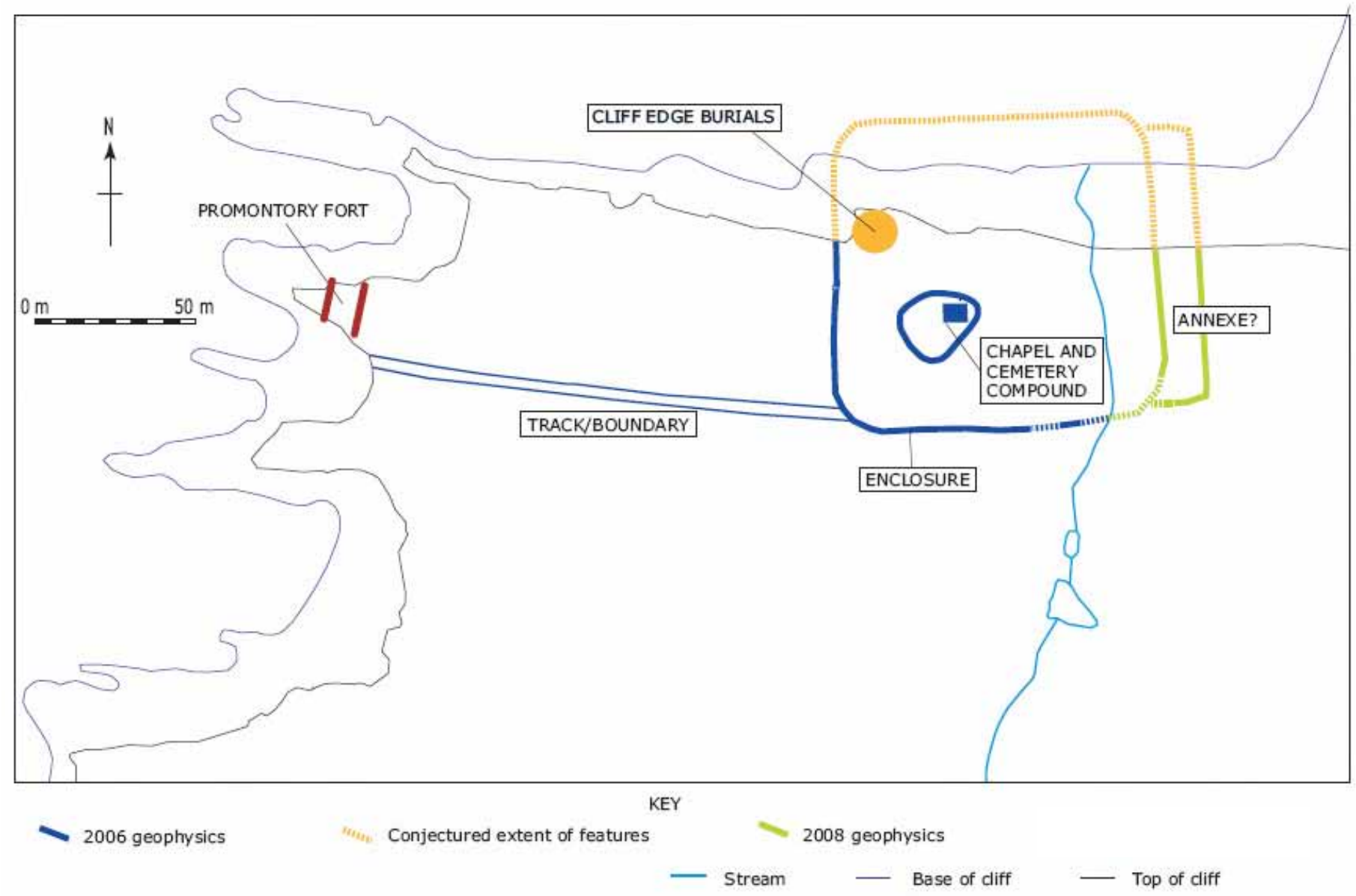

Figure 3: Interpretation of the geophysical survey, showing main features.

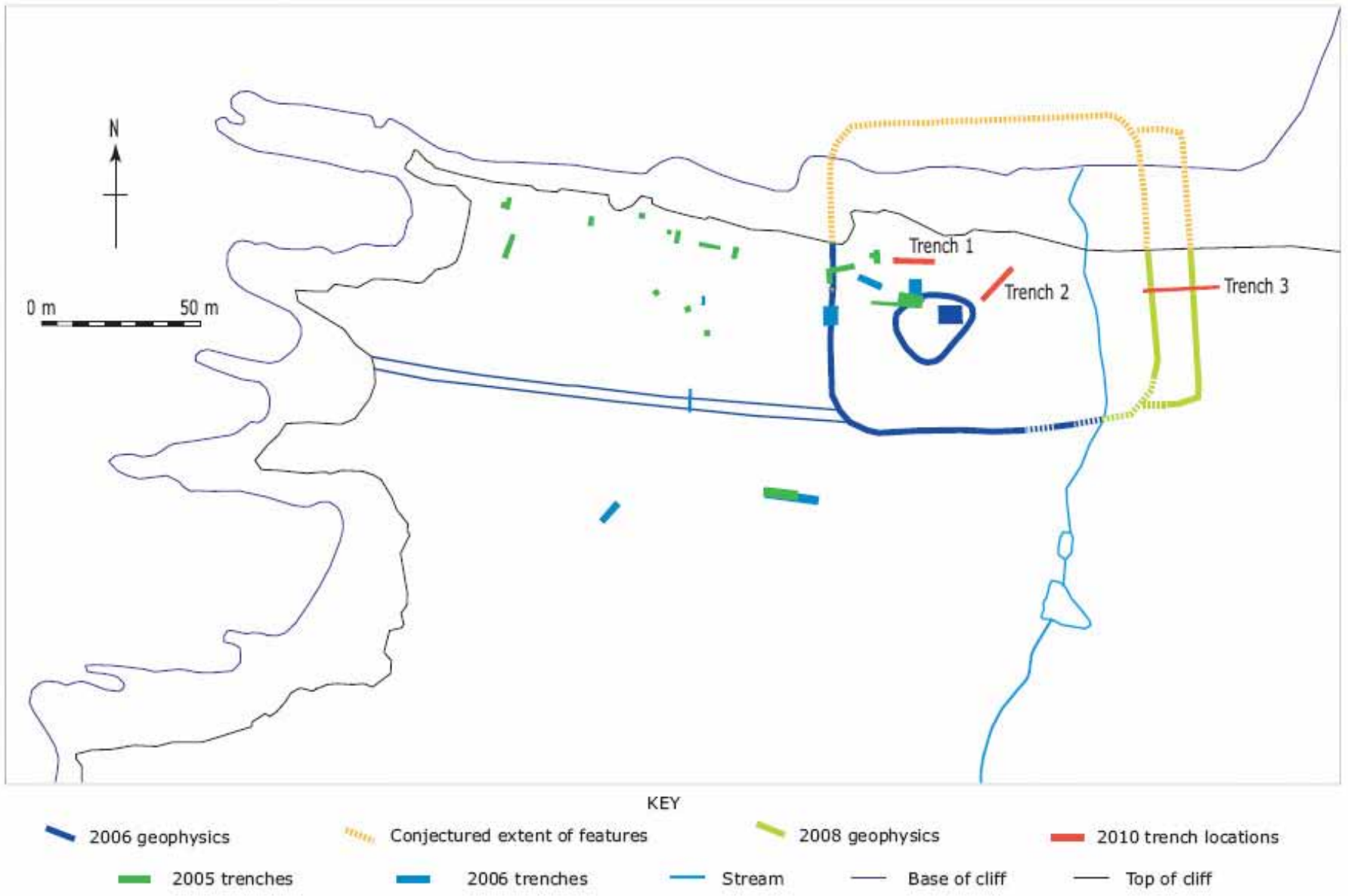

Figure 4: Site plan showing locations of trenches from all excavations.

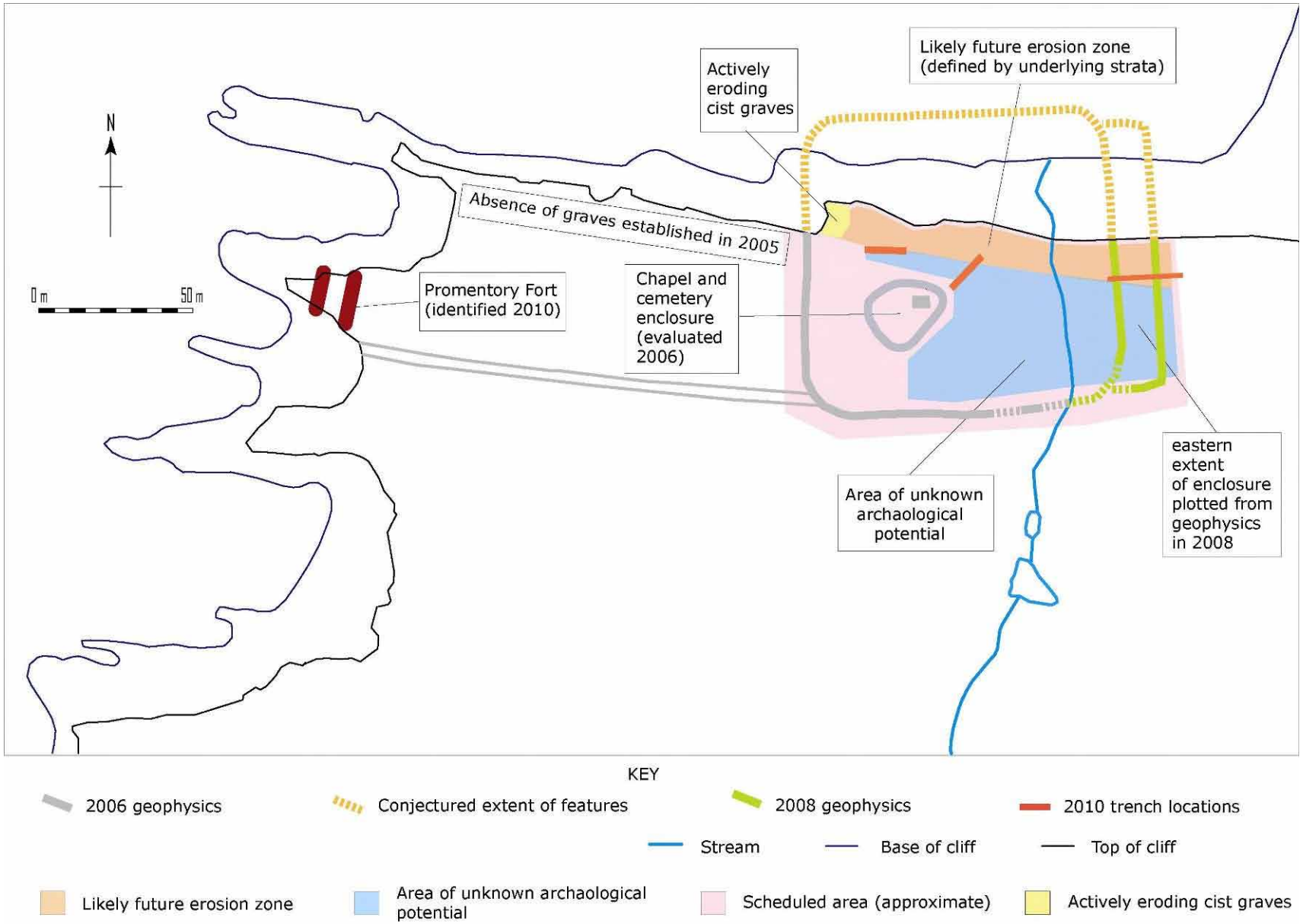

Figure 5: Plan of site, summarising known archaeology and the main erosion zone etc.

4. RESULTS

4.1 Trench 1 (**Figures 6 & 7**)

Approximately 0.25m of topsoil (116) and subsoil (117) was removed to reveal the tops of archaeological features at the west end of the trench. To the east, there appeared to be a greater depth of subsoil/ colluvium. In the apparent absence of archaeological features, it was difficult to discern a distinct horizon between subsoil and natural geological deposits (115).

A single east-west aligned cist grave (106) with stone side-slabs, but no cap-stones, was revealed within the trench. The grave was not excavated. Although no other graves were apparent within the trench, this grave can probably be considered to be part of the group of burials eroding from the cliff face *c.*30m to the northwest.

To the west and north of the grave were four probable post holes. Cut 104 appeared roughly squarish, with a flat base and was cut into the natural shales. It was 0.75m wide, but was only partially visible within the trench. Its fill (103) contained several large stones, suggestive of post packing, but no post-pipe was evident, and the cut only survived to a maximum depth of 0.13m.

Cut 108 appeared in plan to be a circular post-hole with a diameter of 0.28m. On excavation, however, its fill (107) was found to be only 0.04m deep.

Cut 102 was a more convincing circular post hole 0.34m in diameter and 0.22m deep with tapering sides. A possible post pipe was indicated by a relative lack of pebbles in the fill (101), suggesting a post of about 0.10m diameter. This posthole was cut through the fill of ditch 110.

Cut 114 (and fill 113) was another possible post hole that appeared to be cut by ditch 110. It had a diameter of approximately 0.28m and was 0.10m deep, but its edges were difficult to define and it may have been over-dug during the excavation.

Ditch 110 was north-south aligned, U-shaped ditch 0.85m wide and 0.30m deep, cut through weathered shales and bedrock. It appeared to cut the possible post hole 114. Ditch fill 109 was cut by post hole 102.

Another north-south aligned ditch (112) was located 0.95m to the west. This ditch was 0.48m wide, but its western edge was over-dug. The base of the ditch was cut into solid bedrock and appeared to be reasonably flat. Ditch fill 111 contained several large stones in its upper portion.

No finds or other dating evidence were recovered from the features in this trench.

7.2 Trench 2 (**Figures 6 & 7**)

Topsoil (200) and subsoil (201) were removed by machine. Over the majority of the trench, in the absence of archaeological features, it was difficult to discern a clear horizon between the apparently colluvial subsoil and the undisturbed natural geology (216). Shale bedrock was exposed at the northern end of the trench, close to the present ground surface.

Part of a possible natural feature cut across the middle of the trench. The sequence and character of deposits within the feature suggests it was formerly a natural hollow, forming a pond or boggy area that had gradually silted up over time. To the south of this, deposit 202 was excavated to a possible cut 203. Both these contexts were subsequently considered most likely to be natural. Also to the south, deposit 206 was removed to reveal stones 207, which appeared to overlie the edge of the pond feature (212). To the north, deposit 204 was removed to reveal a random spread of stones (205).

A narrow section was excavated across pond feature 212, within which eight deposits were distinguished (208 to 211 and 213 to 215). The character of the deposits suggested they were water lain or waterlogged at some point, but most contained charcoal flecks. Three small microlithic flint artefacts were recovered from deposit 211 lying directly on the natural geology on the southern edge of the feature. Opinion differed between geologists and archaeologists as to which deposits were and were not natural, and the processes of their formation.

Pieces of green glazed medieval pottery were recovered from above the bedrock from within the plough zone near the northern end of the trench.

7.3 Trench 3 (**Figures 6, 7 & 8**)

Ploughsoil and subsoil layers 307 and 306 were removed by machine down to a level at which cut features first became discernable. This varied along the length of the trench from 0.30m at the east, to 0.5m to the west.

The annexe ditch cut (304) was revealed in the eastern part of the trench, of 1.7m width at the machined level. The east side of the cut was steeper, at an approximately 60° angle of slope. The western edge was a more gradual angle with a break of slope at a depth of 0.60m below the ground surface to a near vertical angle. The base of the ditch (at 1.20m below the present ground surface) was a flat and 0.26m wide. The ditch contained five fills (301, 310, 302, 309, and 311).

The basal fill (311) contained several large stones that may originally have been packed around upright posts within the ditch. Fill 309 may represent backfill following the removal of upright posts (no evidence for in-situ posts was apparent). Fills 301, 310 and 302 may represent the periodic deposition of material in the top of the partially backfilled ditch. Layers 301 and 302 contained several large charcoal fragments which may help to date the later episodes of backfilling.

Evidence for the eastern side of the rectangular enclosure ditch (314) was less clear. Although the eastern edge of a feature was identified towards the end of the excavation, no ditch profile similar to that excavated in 2006 (and theoretically at least, part of the same enclosure ditch) was revealed. It was not possible to fully excavate this feature and it seems likely that the trench did not extend sufficiently far to the west to have revealed both edges. The ground at this point slopes down towards the existing stream; the presumed upper fill (305) contained several large charcoal fragments and flecks of burnt earth but was also significantly damper, with a high proportion of clay. It is therefore possible that the presence of the watercourse has affected the survival of the ditch, or the manner in which it was filled.

Between the two ditches, in the interior of the annexe, was a linear feature with a stone lining (312). Several of the stones showed evidence of exposure to heat. On removal of the fill (303), the base of the construction cut (313) also showed signs of burning and was overlain by a few charcoal fragments and burnt bone fragments. Only part of this feature was revealed within the trench. Although only part of the cut was stone lined, it seems likely that the entire length of the cut (which extends beyond both sides if the trench) was originally stone lined.

No ceramics were recovered from features in this trench, but several bulk soil samples and charcoal samples for dating were taken from the ditches and stone-lined feature.

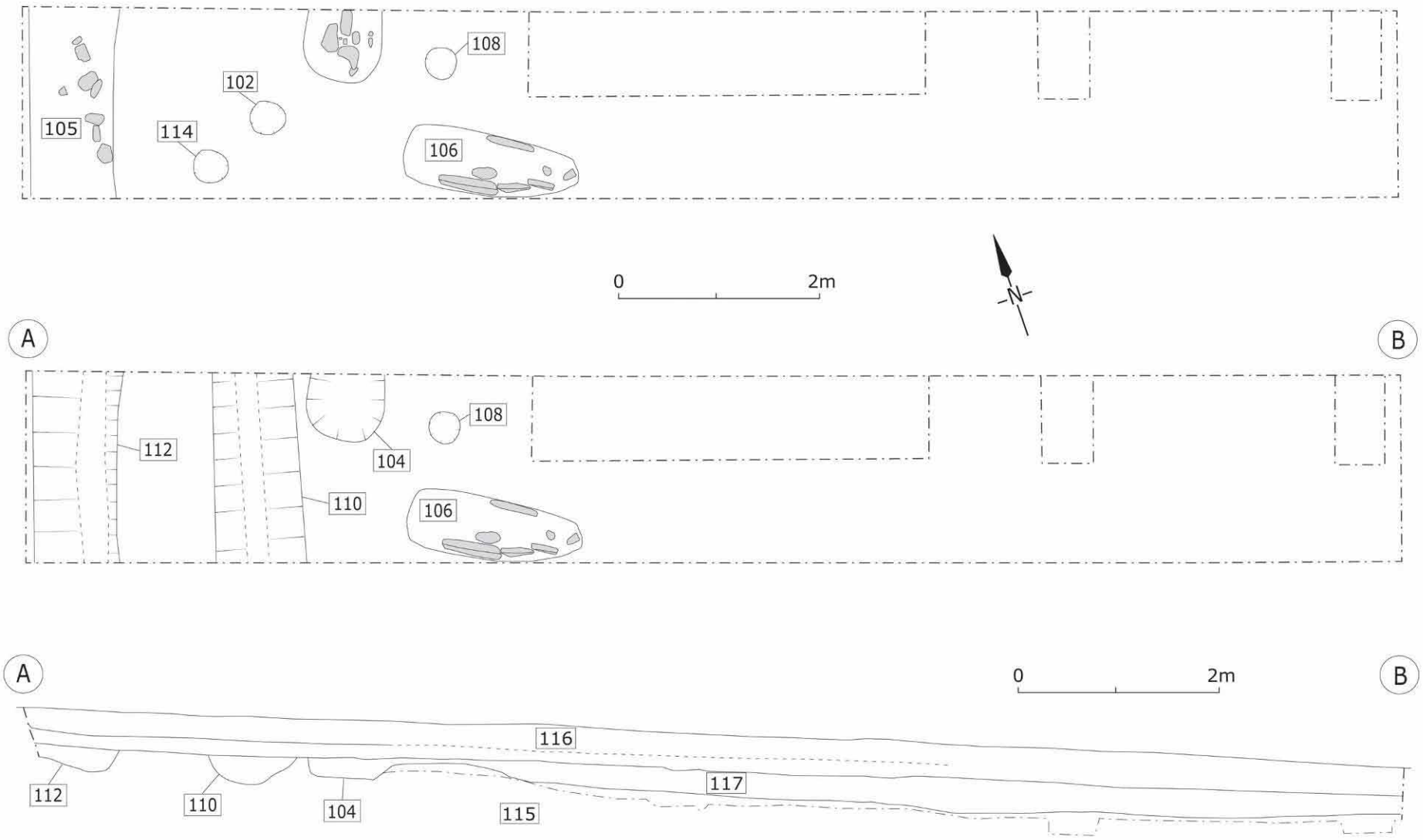

Figure 6: Trench 1 Plans and section

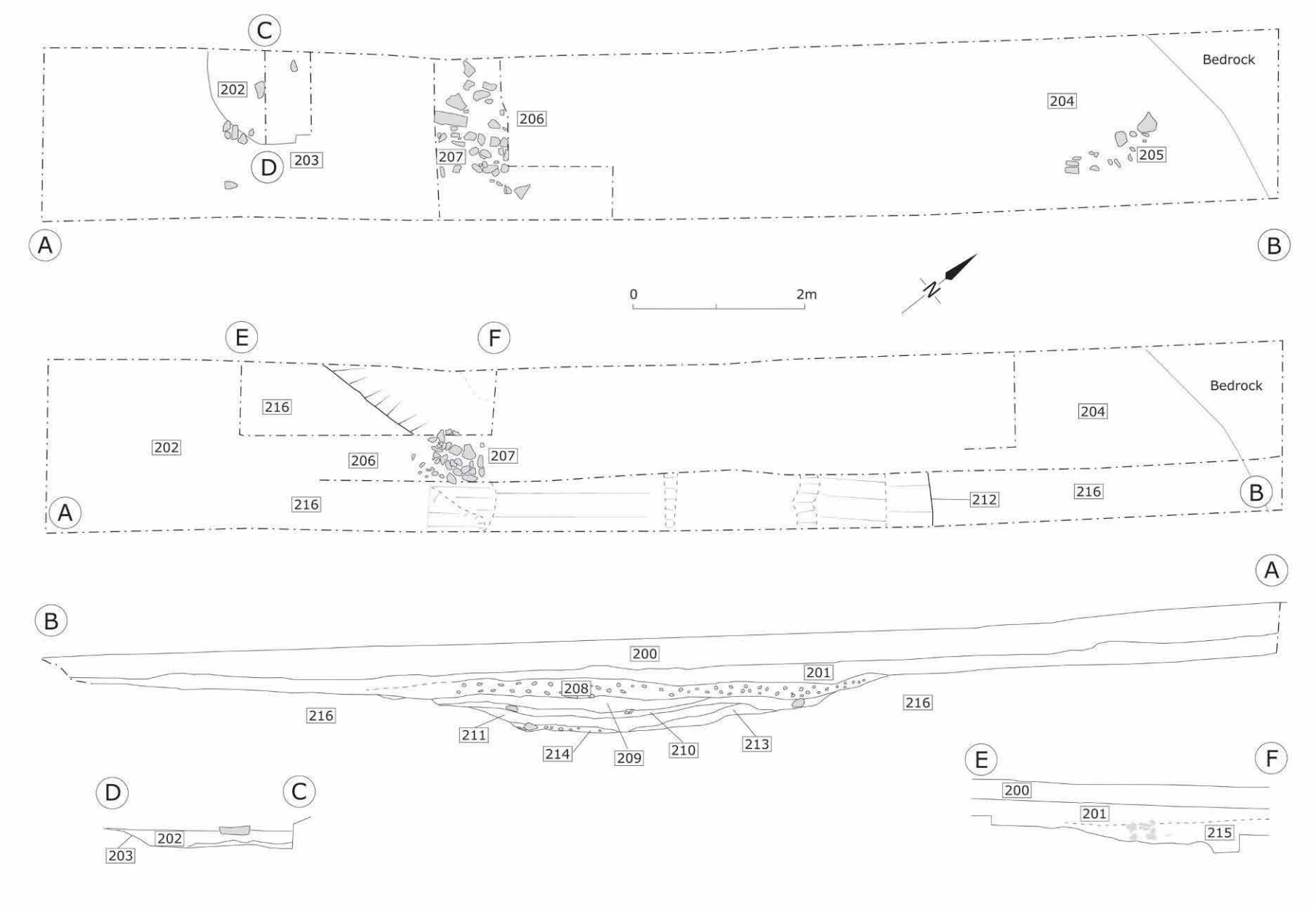

Figure 7: Trench 2 Plan and sections

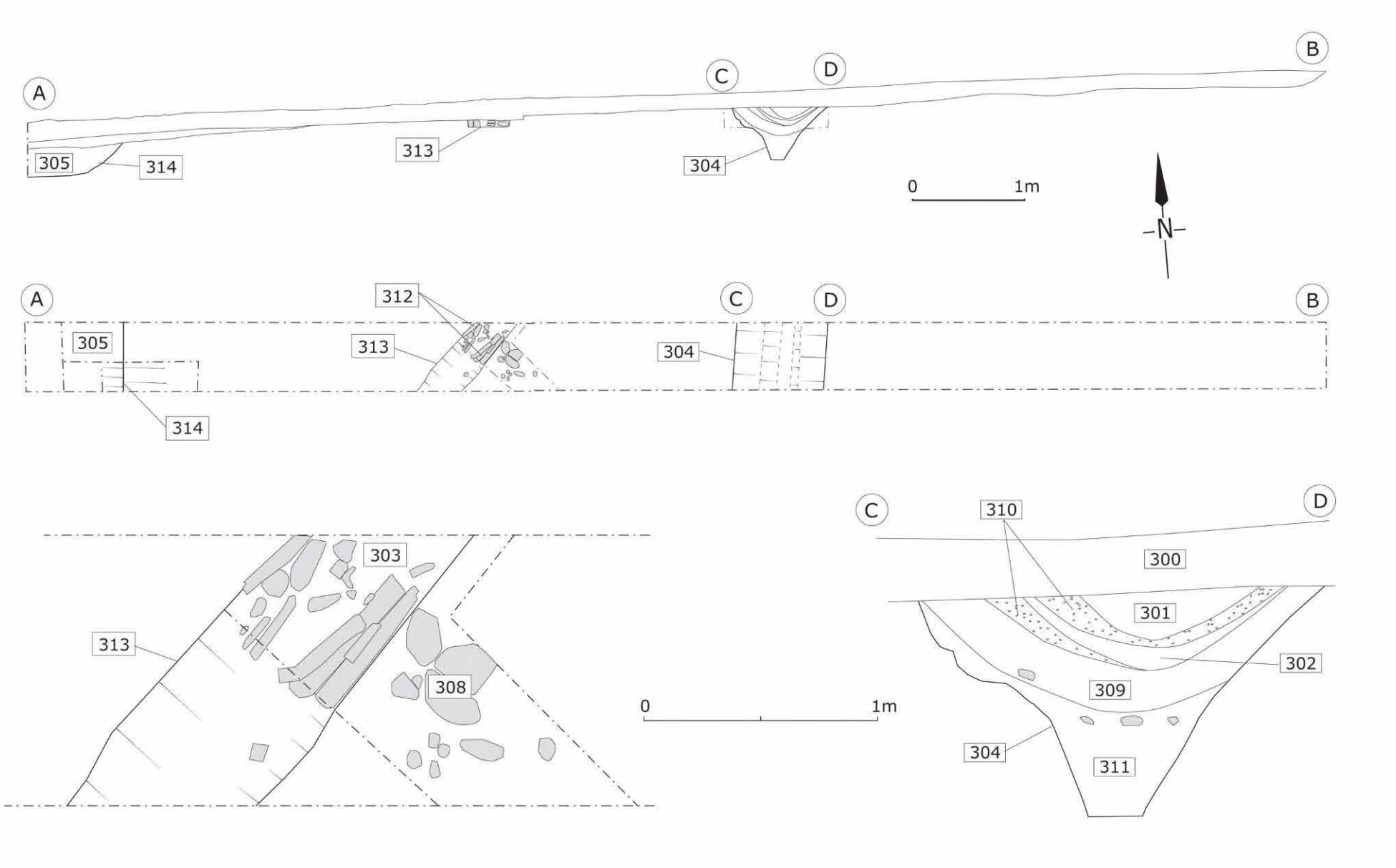

Figure 8: Trench 3 plans and sections

5. DISCUSSION

As is often the case, while the results of the archaeological investigations have answered some questions about the site, and have increased our understanding of the nature of the archaeology that is likely to be lost to coastal erosion in the future, some of the excavated evidence is at present ambiguous or inconclusive.

The burial in Trench 1 indicates that although there are likely to be more burials in this part of the site, they may not be densely concentrated, do not appear to extend further east, and may be confined to what remains of the northwest corner of the rectangular enclosure.

Although their presence suggests there is potential for evidence of structures to survive below the plough zone, some of the postholes in Trench 1 are more convincing than others. It is possible that some of the post holes are actually natural in origin. Elsewhere across the site, in the trenches and test pits excavated in 2005-6, no evidence of cut features within the rectangular enclosure have been revealed. Possible post holes 102 and 114 appear to belong to different phases and no coherent structures can be inferred from the available evidence.

The two parallel ditches are likewise difficult to interpret. Perhaps the most likely interpretation is that they are the remnants of a former field boundary, although there is no clear evidence of such a boundary on the geophysical survey or historic mapping of the area, and the 0.95m gap between the ditches does not provide room for a very substantial field bank. The ditches may also define a subdivision of the larger enclosure.

The differences in the profiles of the two ditches also offers the possibility that ditch 112 (narrower, with a flatter base) could be a foundation cut for a building with a sill beam foundation. Ditch 110 could be a drip gully running parallel on the outside of the building. Such buildings might be expected within a Roman military camp, or with settlement during the early medieval/medieval periods. On the available evidence, however desirable this interpretation of the evidence might be such speculation must remain almost complete conjecture until further evidence can be obtained.

The apparently natural pond in Trench 2 demonstrates that there was prehistoric activity in the area during the Mesolithic period, and that the landscape had changed considerably between then and the construction of the rectangular enclosure. The absence of cut archaeological features is disappointing, but perhaps helps to demonstrate how archaeological features within the enclosure appear to be dispersed, restricted to specific locations, or only surviving in specific areas where later agricultural activity has not completely destroyed underlying deposits. It is possible that this area remained boggy and wet during the later periods and some of the stone revealed on its surface may represent episodes of consolidation of the land.

In Trench 3, the profile of the annexe ditch may be suggestive of a palisade trench. The stones within its basal and upper fills may derive from packing for the upright posts of a palisade wall. While not conclusive, such a possibility supports the interpretation of the site as being a Roman camp. Comparing the profile of this ditch with the enclosure ditch excavated in 2006, there are differences of scale, but possible similarities of form. This may support the interpretation of ditch 304 as an addition to the east side of the main enclosure. It is unfortunate that it was not possible to obtain a profile across the eastern ditch of the original enclosure, to compare with the other ditch profiles.

Radiocarbon dates were obtained from the outer annexe enclosure ditch from fill (302), an upper, but well sealed fill of the feature. Interpretation of this fill suggests it represents an episode of backfilling of the ditch, presumably

associated with disuse of the feature. A radiocarbon date of Cal AD 610 – 690 (SUERC-32876) was obtained from charcoal from fill 302.

The stone-lined feature within the annexe is considered most likely to be part of a corn dryer, or some form of hearth or oven. The temperatures indicated by the scorching and reddening of the stones and geology do not suggest very high temperatures. If a corn drier (as would seem to be most likely), such structures can occur in a range of sizes and a variety of forms, depending on the date of their construction. There is insufficient evidence of the form of this feature to be able to date it by its form. It is, however, most likely that this feature is evidence of settlement activity contemporary with the occupation of the rectangular enclosure and its possible annexe. A radiocarbon date of Cal AD 610 – 690, but with a possible addition range of Cal AD 750 – 760 (SUERC-32877) was obtained from charcoal from fill 303, the upper fill representing collapse or backfill.

The two radiocarbon dates obtained from this investigation are almost identical, indicating activity within the eastern annexe of the rectangular enclosure at West Angle of between AD 610 and 690, (alternatively possibly dates of between AD 750 – 760 may be indicated for the corn drier). These 7th century dates are slightly later than the earliest fill of the rectangular enclosure ditch on the western side. This suggests that activity within the rectangular enclosure commences earlier than the 8th century, during which the annexe ditch and corn drier fall into disuse. A single date was obtained previously for one of the eroding burials of Cal AD 650 – 780 (Beta-229577), suggesting that the cliff top cemetery was in use during the 7th and 8th centuries also. One of the stratigraphically later burials within the oval cemetery enclosure returned a date of Cal AD 890 – 1120 (Beta-229575), and suggests that this ovoid cemetery enclosure may have gone out of use by the early twelfth century.

The radiocarbon dates and nature of the features within the rectangular enclosure at West Angle Bay suggest it enclosed both a cemetery and possible settlement. Examples of similar sites in this area are very rare and as such the West Angle Bay site provides a tantalising glance into a potential form of nucleated settlement (combining settlement, cemetery and evidence for agricultural processing) and one which may also have been defended (the evidence for the eastern annexe ditch to have had a palisade).

Laboratory Number	**Result BP**	**Calibrated range at 2 sigma**	**Material**	**Context**
SUERC-32876	1370±30	Cal AD 610 - 690	Charcoal - Fraxinus	From fill 302, a deposition layer in ditch 304, Trench 21.
SUERC-32877	1365±30	Cal AD 610 – 690 & Cal AD 750 - 760	Charcoal - Prunus	From fill 303 from possible corn dryer 313 in Trench 21.

Table 1: Radiocarbon data and dates from this investigation

6. CONCLUSIONS

The excavations have indicated that although there are significant archaeological features within the area defined by the rectangular enclosure ditch, they appear not to be widespread or densely packed, or to only survive in areas where the archaeological horizon is relatively deeply buried or cut into solid bedrock. Agricultural activity over the centuries has resulted in the truncation of earlier land surfaces and a 'smoothing out' of what may have been a less uniform landscape.

As coastal erosion continues, the currently visible cist graves are likely to be lost relatively soon. Additional burials are likely to be revealed, but perhaps less frequently. Apart from the burials, no features of sufficient importance to warrant immediate archaeological mitigation were identified in the trenches opened in 2010. Continued monitoring of the coastal erosion will hopefully enable the recording of any features that are revealed. Any finds or human remains may be recovered for appropriate reburial or dating, although this would be done in a piecemeal way and information may be lost following episodes of erosion after larger storm events.

At present, the date of cut features associated with occupation of the enclosure is mostly unknown. These features will be less apparent as they erode from the cliff face, and it is unlikely that evidence of the periods of occupation represented at the site can be established this way.

Although the small scale investigations undertaken at the site so far have increased our understanding of the site considerably, they have also demonstrated that small investigations undertaken on the grounds of threat related assessment do not necessarily involve the same focus and scale of excavation that would need to be undertaken to answer wider research questions.

To gain a better understanding of the development of the site, further relatively large scale, open area excavation would be required. Such excavation would need to be research led and focussed on specific areas not necessarily under immediate threat from coastal erosion. Such analysis could include the following areas:

- How were different activities within the rectangular enclosure laid out?
- What form were the domestic buildings?
- Was an earlier chapel site present?
- What kinds of agricultural processing was undertaken within the enclosure?
- Chronology of the site, and why was the annexe seemingly disused during the 8th century?
- Was the enclosure definitely defended, and if so, from whom?

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Photo 1: Trench 1 looking east

Photo 2: Cist grave 106, looking south

Photo 3: Trench 1 looking east. Stones in fill of ditch 112

Photo 4: Trench 1 looking south. Ditches 110 and 112

Photo 5: Post hole 104 with possible packing stones

Photo 6: Probable post hole 102

Photo 7: Trench 2 looking south

Photo 8: Trench 2 soil profile

Photo 9: Edge of pond feature 212 looking east

Photo 10: Trench 2. Stones at base of pond feature

Photo 11: Trench 2. South side of 212 with stones 207

Photo 12: Stones 207

Photo 13: Trench 3. Ditch 304 looking north

Photo 14: possible packing stones in ditch 204

Photo 15: Trench 1. Stone lined feature looking south

Photo 16: Machine excavation of ditch 314

Photo 17: Last remnant of promontory fort showing ditch between two banks, looking north

Photo 18: Example of process and effects of erosion

Photo 19: Bedrock strata capped with (and protected by) eroding shales and silts

Photo 20: A visit from the local school

WEST ANGLE BAY
ANGLE, PEMBROKESHIRE
ARFORDIR EXCAVATION 2010

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Yn unol â'n nôd i roddi gwasanaeth o ansawdd uchel, croesawn unrhyw sylwadau sydd gennych ar gynnwys neu strwythur yr adroddiad hwn

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