

CPAT Report No. 1722

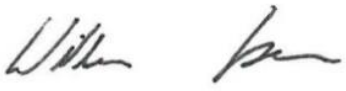


Wat's Dyke, Kiln Lane, Hope, Flintshire

Archaeological Watching Brief



YMDDIRIEDOLAETH ARCHAEOLEGOL CLWYD-POWYS
CLWYD-POWYS ARCHAEOLOGICAL TRUST

Client name: Flintshire County Council
 CPAT Project No: 2405
 Project Name: Kiln Lane, Hope
 Grid Reference: SJ 3108 5825
 County/LPA: Flintshire
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 with the Chartered Institute for Archaeologists

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Summary

Between October and December 2019 the Clwyd Powys Archaeological Trust carried out a watching brief during groundworks for the installation of a new drainage pipe within the area for a scheduled section of Wat's Dyke, to the east of Kiln Lane, Hope, in Flintshire.

The results revealed that there had been considerable previous disturbance within the ditch, along the west side of the dyke, resulting from previous drainage schemes, although there was little apparent impact upon the upstanding bank or the form of the ditch.

The orientation of the drainage pipe, at an oblique angle along the ditch, and the method of construction, were not conducive to detailed recording of the archaeological deposits, although it was possible to determine the extent of the ditch.

Crynodeb

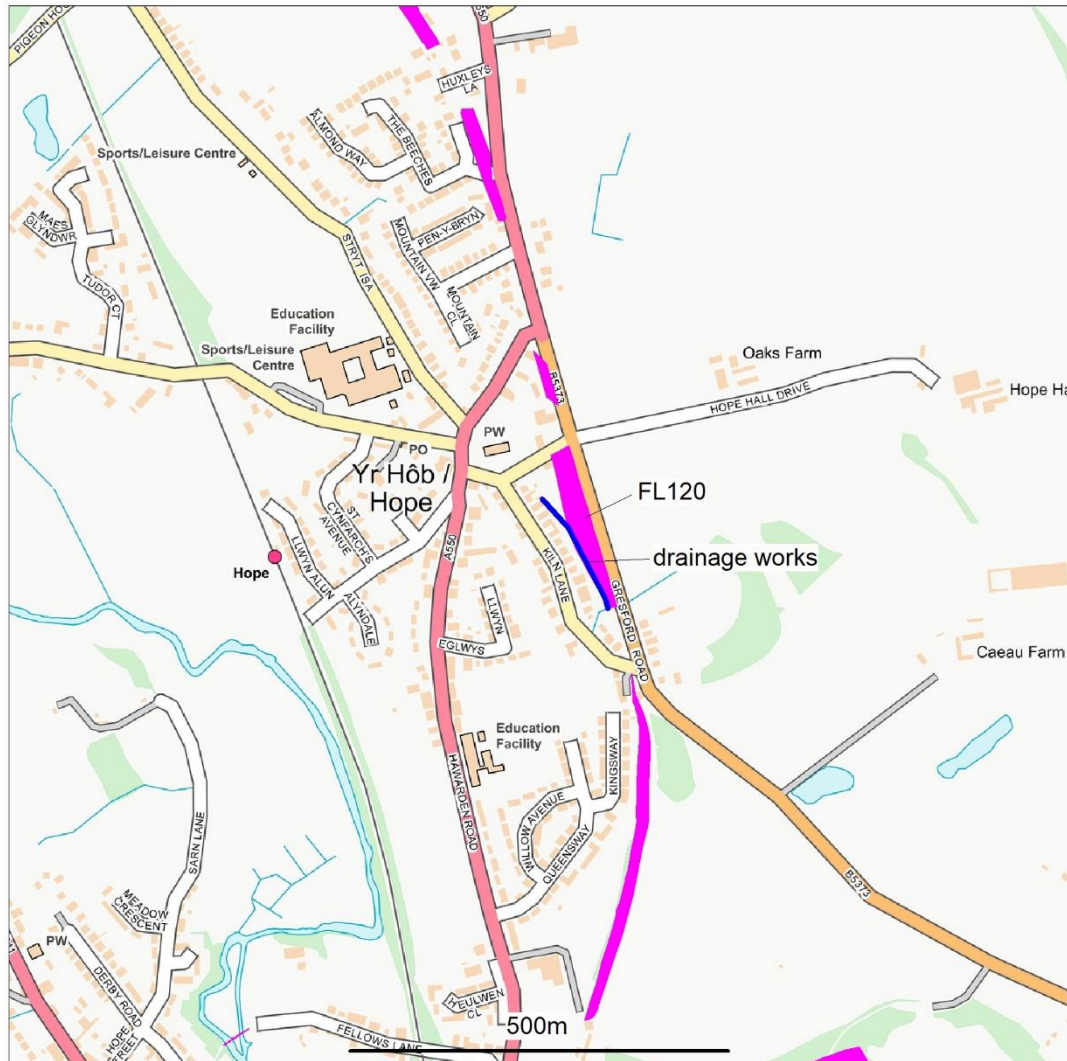
Rhwng mis Hydref a mis Rhagfyr 2019, bu Ymddiriedolaeth Archaeolegol Clwyd-Powys yn cynnal briff gwyllo yn ystod gwaith paratoi tir ar gyfer gosod pibell ddraenio newydd o fewn ardal adran restredig o Glawdd Wat, i'r dwyrain o Kiln Lane, yr Hôb, yn Sir y Fflint.

Datgelodd y canlyniadau y bu aflonyddu blaenorol sylweddol o fewn y ffos, ar hyd ochr orllewinol y clawdd, yn sgil cynlluniau draenio blaenorol, er mai prin oedd yr effaith a oedd i'w gweld ar y clawdd a oedd ar ei sefyll neu ar ffurf y ffos.

Nid oedd cyfeiriadedd y bibell ddraenio, ar ongl letraws ar hyd y ffos, a'r dull o'i hadeiladu, yn ffafriol ar gyfer cofnodi dyddodion archaeolegol yn fanwl, er y bu'n bosibl pennu graddau'r ffos.

1 Introduction

- 1.1. The Field Services Section of the Clwyd-Powys Archaeological Trust was invited by Flintshire County Council to undertake an archaeological watching brief during a programme of drainage works which were partly within the scheduled area of Wat's Dyke FL120, Section E of Hope (Fig. 1; SJ 3108 5825). The works involved the replacement of an existing drainage pipe, a section of which lay within the infilled ditch of the monument.



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Fig. 1 The location of the drainage works in relation to scheduled section of Wat's Dyke

- 1.2. Scheduled Monument Consent (SMC) for the works was granted in February 2019, with the inclusion of the following conditions:
1. that you shall afford access at all reasonable times to any Cadw official or archaeologist nominated by Cadw to monitor progress of the works;
 2. that the works shall be carried out in accordance with the plans and documents submitted to Cadw on 25 January 2019. No variations shall be permitted unless they have been authorised in advance in writing by the Welsh Ministers;

3. that no excavation works shall commence until the Welsh Ministers have been informed in writing of the name of an appropriately qualified archaeologist who will be carrying out an archaeological watching brief in accordance with a written scheme of investigation which shall be submitted to and approved in writing by the Welsh Ministers. No work shall commence until the Welsh Ministers has confirmed in writing that the proposed archaeologist is acceptable. A digital copy of the archaeological report shall be submitted to the Welsh Ministers for approval within 8 weeks of the project being completed;
4. that the Welsh Ministers shall be given two weeks' written notice (email notification is acceptable) of the beginning of excavation works in order for its representative order to visit the site once the trench is opened to its maximum extent, should they require to do so;
5. that vehicles and machinery shall be excluded from the upstanding earthworks of the monument in order to avoid incidental damage by tracking;
6. that all staff, contractors and sub-contractors shall be given a brief toolbox talk setting out the extent of the monument and the restrictions and sensitivities that this carries with it; and
7. That any historic or archaeological features not previously identified which are revealed when carrying out the works shall be retained in-situ and reported to the Welsh Ministers immediately. Works shall be halted in the area/part of the site affected until provision has been made for retention and/or recording of the feature by the project archaeologist in accordance with details submitted to and approved in writing (email is acceptable), in advance.

2 Background

- 2.1. Wat's Dyke is thought to have been constructed as a territorial boundary, possibly dating to the 8th century or early 9th century AD, which extended for 64km between Basingwerk in Flintshire and Maesbury in Shropshire and originally consisted of a rampart bank and a wide western ditch.
- 2.2. The scheduled section in question extends for 220m, aligned north-north-west to south-south-east. The visible earthworks comprise a low bank up to 8m wide and 1.4m high, with a ditch 6m wide to the west. The monument lies between and partly within gardens to the rear of properties fronting Kiln Lane and the B5373 Gresford Road.
- 2.3. In his survey of Offa's and Wat's Dykes, Sir Cyril Fox (1955, 236) described this section of the Dyke as follows (See Fig. 2):

'A rise in the hedge at the north end of the field 45 fixes its position; within living memory it followed a course in fields 45 and 45a roughly parallel to the new road, curving eastwards into this road in field 46 to avoid a patch of marsh which formerly existed here . . . The Dyke then rises over the adjacent rocky outcrop – which formed the alignment mark for this stretch – the scarp being quite obvious. Thereafter it follows a curved course along the margin of the alluvial flat of the Alyn. At first it is a fine ridge with ploughed-in western ditch; as the slope steepens the ridge

becomes a scarp...The western boundary of Rhydyn farmhouse garden represents this scarp'

- 2.4. The dyke survives as an upstanding earthwork, up to 3-4m high, to the rear of both the development plot and neighbouring properties. As is typical with other sections of the dyke, the earthwork is overgrown with a combination of blackthorn and mature tree growth. The western ditch has long been infilled and has been developed as gardens for the adjacent Kingsway housing.
- 2.5. Wat's Dyke has been the subject of a number of archaeological interventions during the past 40 years, generally in the form of archaeological watching briefs or opportunistic excavated sections across the width of the dyke and ditch. One of the sites excavated in 1978 was at Rhydyn Hall, 1km south of the drainage works, where the dyke's ditch was seen to be 3.5m wide. However, the excavators were unsure as to whether or not the full width had been identified (Hill and Worthington 2003, Site 53).

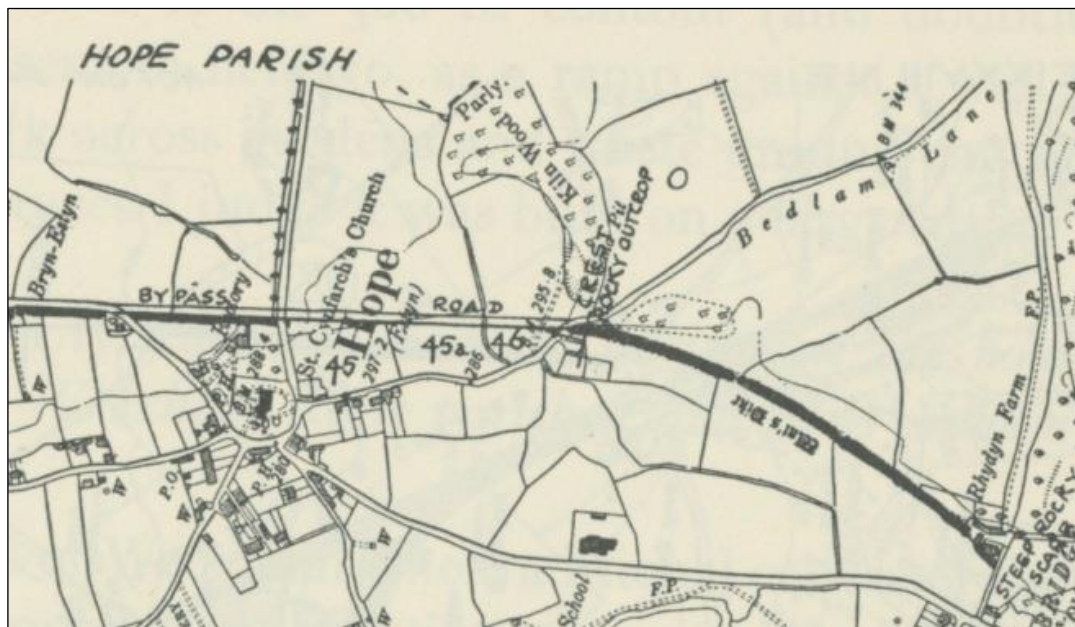


Fig. 2 Extract from Fox (1955) showing the line of Wat's Dyke east of Hope to Rhydyn Farm

- 2.6. A watching brief further south, to the rear of 26 Kingsway, confirmed the width of the ditch to be 4.7m, although only the uppermost part of the ditch was revealed (Grant 2015).

3 Watching Brief

- 3.1. The watching brief was conducted intermittently between 16 October and 4 December 2019 in accordance with the Chartered Institute for Archaeologists' (CifA) (2014) *Standard and Guidance for an Archaeological Watching Brief*.
- 3.2. The initial groundworks were carried out in the garden to the rear of No. 27 Kiln Lane. This section was judged to be outside of the extent of the ditch associated with Wat's. Soil deposits in this area comprised a cohesive soft brown silt topsoil (1), 0.23m thick, overlying a light yellowish/blue clay (2) >0.92m thick (Fig. 3).



Fig. 3 Trench section in garden to the rear of No. 27 viewed from the west. Photo CPAT 4730-001

- 3.3. There was a continuation of this stratigraphic sequence into the southern extent of the adjacent garden of No. 25. In the centre of this area however there was a distinct change of stratigraphy indicating that the trench was cut through the upper ditch silts. Underlying the topsoil (1), 0.28m thick, was a compacted yellow silt clay with iron mottling (3), 0.32m thick. Underlying deposit (3) was a soft silty clay (4), 0.5m thick, with charcoal inclusions and occasional blue grey clay marbling and sandstone fragments. At the base of the trench, at a depth of 1.1m, was a stiff greyish clay layer (5), which was interpreted as a continuation of the natural deposition (Fig. 4). The width of the trench meant that it was not possible to discern the form of the ditch [6] in any detail.



Fig. 4 Trench section in garden to the rear of No. 25 viewed from the south-west. Photo CPAT 4730-007

- 3.4. Groundworks within the garden to the rear of No. 23 revealed a broad continuation of the stratigraphy identified in No. 25. The groundworks trench was excavated along a parallel orientation to the line of the ditch, resulting in a fairly uniform thickness of deposition across this area. The topsoil (1) was 0.2m thick, overlying a clay layer (3), 0.2-0.3m thick, overlying a greyish brown gritty clay (4), 0.2-0.3m thick, lying above the natural clay layer (5), excavated into to a depth of 0.1m (Fig. 5). The cut for the ditch [6] was identified at a depth of approximately 0.8m in this section of the scheme.



Fig. 5 Trench section in garden to the rear of No. 23 viewed from the south-west. Photo CPAT 4730-020

- 3.5. The trenching within the garden to the rear of Nos. 19 and 21 revealed a continuation of the deposits identified in No. 23, with the topsoil (1) 0.25m thick, a clay layer (2), 0.45m thick, a mixed brown clay deposit (3), 0.65m thick, and the natural clay (5), >0.15m thick. The interface with the cut for the ditch [6] was identified at a depth of 1.35m below ground level within this section of the scheme (Fig. 6).



Fig. 6 View from the south-east of the trenching in the garden to the rear of No. 19. Photo CPAT 4730-034



Fig. 7 View from the south-west of trenching in the garden to the rear of No. 17. Photo CPAT 4730-041

- 3.6. The maximum trench depth extended to 1.75m below ground level at the boundary between Nos. 19 and 17. The soil deposition sequence at this point comprised the topsoil layer (1), 0.25m thick, overlying the mixed clayey silt (4), 0.5m thick, with the cut for the ditch encountered a depth of 0.75m. The natural deposition (5) was excavated through to a maximum thickness of 0.95m (Fig. 6). A poorly defined cut for a land drain [8] filled by (7) was revealed running north-east to south-west at this point at a depth of 1.7m.
- 3.7. Trenching within the garden to the rear of No. 17 revealed fairly uniform deposition comprising the topsoil (1), 0.25m thick, overlying the mixed clayey ditch fill (4), 0.7m thick, with the cut for the ditch [6] visible at a depth of 0.95m. The ditch fill (4) became rather shallow at the boundary between No. 17 and No. 15 indicating that the drain trench was close to the outer, eastern edge of the ditch (Fig. 7).
- 3.8. Trenching within the garden to the rear of No. 15 appeared to pass across the centre of the ditch. The topsoil (1) extended to 0.25m in depth, overlying the ditch fill (4), which was >1.25m in thickness (Fig. 8). Natural deposition was not attained in this area. There was a continuation of a land drain [8] across this area, and considerable truncation of the ditch fill by the cut for a larger drain [10], filled by (9), close to the boundary between Nos. 15 and 13. A drain running broadly north-south and possibly associated with the construction of the bypass road, appeared to have been cut across the dyke immediately to the east of the boundary although this was not investigated further.



Fig. 8 View from the south-west of trenching in the garden to the rear of No. 15 Photo CPAT 4730-51

- 3.9. Trenching within the garden to the rear of No. 13 revealed a continuation of the deposition identified in the garden of No. 15 (Fig. 9). The excavation of a connecting trench running south-east appeared to reveal part of the profile of the ditch cut [6] at its western extent (Fig. 10). The slope of the ditch at this point was not more than 30 degrees with a flat profile.

- 3.10. The line of the drainage trench passed outside of the confines of the ditch immediately to the south of the boundary between Nos. 13 and 11, where the stratigraphy consisted of the topsoil (1), 0.45m thick, overlying the light yellowish/blue clay (2) to a thickness of >0.6m (Fig. 11).



Fig. 9 View from the west of the trenching in the garden to the rear of No. 13 Photo CPAT 4730-54



Fig. 10 View from the east of a connecting trench within the garden of No. 13 showing the southern profile of the ditch Photo CPAT 4730-058

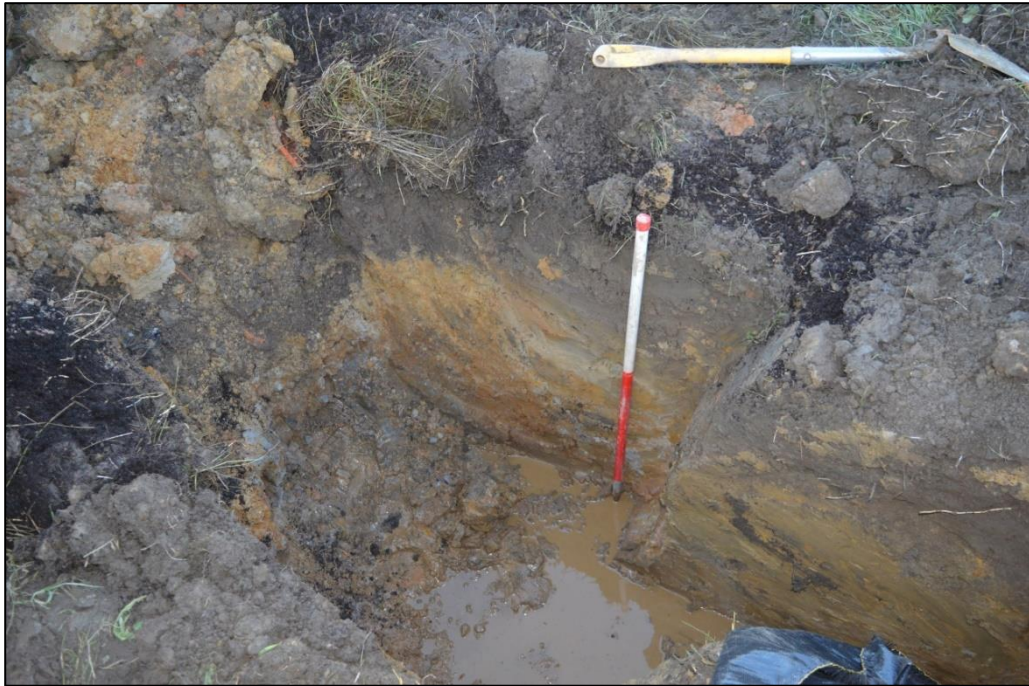


Fig. 11 View from the south-west of trenching at the boundary between Nos. 13 and 11 Photo CPAT 4730-63

4 Conclusions

- 4.1. The watching brief was maintained throughout the mechanical excavations for the replacement of an existing drainage pipe with one of a larger diameter. The results have enabled the approximate extent of the ditch along the west side of Wat's Dyke to be plotted (Fig. 12), and allowed an investigation of the nature and extent of the material infilling the upper sections of ditch.
- 4.2. The ditch appeared to be approximately 6m in width along the entire extent of the area covered in the watching brief. It was unclear to what depth the ditch extended as this was below the level of the groundworks, but the cut interface for the ditch was revealed at 1.35m below ground level in the gardens behind No. 19, less than 2m from the edge of the dyke. The profile of the ditch was not encountered at all at 1.25m below ground level in the centre of the garden behind No. 15. The edge of the western ditch profile was revealed in the garden of No. 13 where at a depth of 0.3m below ground level. It seems therefore, that the upper ditch profile was fairly symmetrical.
- 4.3. The upper ditch fill comprised a clayey layer of redeposited natural, apparently used as a capping deposit, presumably of recent date. This deposit did not extend further north than the garden of No. 19, possibly having been truncated by modern drainage works. Underlying the capping layer was a main fill comprising a heterogeneous deposit of clay, with fragments of blue grey clay and sandstone, containing occasional charcoal. No artefacts were recovered from this deposit, which would suggest it was backfilled in antiquity.
- 4.4. The natural deposit comprised a yellow/blue clay, containing natural occurring coal fragments. There was evidence of organic streaking on the interface of the ditch cut, but

this is likely to have been caused by vegetation growing within the ditch when it was still an extant feature.

5 Sources

Published sources

Fox, C., 1955. *Offa's Dyke: A Field Survey of the Western Frontier-works of Mercia in the Late 7th and 8th centuries AD*. London: British Academy.

Hill, D. and Worthington, M., 2003. *Offa's Dyke – History & Guide*. Tempus Publishing Ltd.

Unpublished sources

Hill, D., Wilson D. and Worthington, M., n.d. *Offa's and Wat's Dyke Project Archive*.

Grant, I., 2015. *26 Kingsway, Hope, Flintshire: Archaeological Watching Brief*. CPAT Report No. 1372

6 Archive deposition Statement

- 6.1. The project archive has been prepared according to the CPAT Archive Policy and in line with the Cifa *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives guidance* (2014). The archive is entirely digital and will be deposited jointly with the Historic Environment Record, Clwyd-Powys Archaeological Trust and the National Monuments Record, RCAHMW.

Archive summary

CPAT Event PRN: 140331

27 watching brief record forms (scanned)

63 digital photographs, CPAT film no 4730

Appendix 1: CPAT WSI 2100

1 Introduction

- 1.1. The Field Services Section of the Clwyd-Powys Archaeological Trust has been invited by Flintshire County Council to undertake an archaeological watching brief in connection with a programme of drainage works which are partly within the scheduled area of Wat's Dyke FL120, Section E of Hope (SJ 3108 5825). The works involve the replacement of an existing drainage pipe, a section of which lies within the infilled ditch of the monument.
- 1.2. Scheduled Monument Consent (SMC) for the works was granted in February 2019, with the inclusion of the following conditions:
 1. that you shall afford access at all reasonable times to any Cadw official or archaeologist nominated by Cadw to monitor progress of the works;
 2. that the works shall be carried out in accordance with the plans and documents submitted to Cadw on 25 January 2019. No variations shall be permitted unless they have been authorised in advance in writing by the Welsh Ministers;
 3. that no excavation works shall commence until the Welsh Ministers have been informed in writing of the name of an appropriately qualified archaeologist who will be carrying out an archaeological watching brief in accordance with a written scheme of investigation which shall be submitted to and approved in writing by the Welsh Ministers. No work shall commence until the Welsh Ministers has confirmed in writing that the proposed archaeologist is acceptable. A digital copy of the archaeological report shall be submitted to the Welsh Ministers for approval within 8 weeks of the project being completed;
 4. that the Welsh Ministers shall be given two weeks' written notice (email notification is acceptable) of the beginning of excavation works in order for its representative order to visit the site once the trench is opened to its maximum extent, should they require to do so;
 5. that vehicles and machinery shall be excluded from the upstanding earthworks of the monument in order to avoid incidental damage by tracking;
 6. that all staff, contractors and sub-contractors shall be given a brief toolbox talk setting out the extent of the monument and the restrictions and sensitivities that this carries with it; and
 7. That any historic or archaeological features not previously identified which are revealed when carrying out the works shall be retained in-situ and reported to the Welsh Ministers immediately. Works shall be halted in the area/part of the site affected until provision has been made for retention and/or recording of the feature by the project archaeologist in accordance with details submitted to and approved in writing (email is acceptable), in advance.

2 Methodology

Fieldwork

Watching brief

- 2.1. The watching brief will be conducted according to the Chartered Institute for Archaeologists' (CIfA) *Standard and Guidance for an Archaeological Watching Brief* (2014). The watching brief will be undertaken to monitor all groundworks within the scheduled area of FL120, including works to the rear of nos. 11-27 Kiln Lane (Fig. 2). The excavation of any archaeological features or deposits will be undertaken by hand using the conventional techniques for archaeological excavation:
- Where features of archaeological interest are identified during the ground works they will be systematically investigated by hand with sufficient work being undertaken to determine their date, character and function, using the conventional techniques for archaeological excavation and in accordance with CIfA Standard and Guidance.
 - All features will be located as accurately as possible on an overall plan of the development at an appropriate scale, showing boundaries depicted on Ordnance Survey mapping.
 - Contexts will be recorded on individual record forms, using a continuous numbering system, and be drawn and photographed as appropriate.
 - Plans will be drawn on permatrace to a scale of 1:10, 1:20 or 1:50, as appropriate.
 - All photography will be taken using a digital SLR camera with a minimum resolution of 12 mega pixels, including a metric scale in each view, with views logged in a photographic register.
 - In the event of human burials being discovered the Ministry of Justice (MoJ) will be informed. The remains will initially be left in situ, and if removal is required, a MoJ licences will be applied for under the Burial Act 1857.
 - In the event of finding any artefacts covered by the provisions of the Treasures Act 1996, the appropriate procedures under this legislation will be followed.
- 2.2. The watch brief will also involve a full photographic record during and after the completion of the reinstatement to aid future monitoring.

Post-excavation and reporting

- 2.3. All artefacts and environmental samples will be treated in a manner appropriate to their composition and a sampling strategy will be developed as appropriate:
- All stratified finds will be collected by context, or where appropriate, individually recorded in three dimensions. Unstratified finds will only be collected where they contribute significantly to the project objectives or are of particular intrinsic interest.
 - All finds and samples will be collected, processed, sorted, quantified, recorded, labelled, packed, stored, marked, assessed, analysed and conserved in a manner appropriate to their composition and in line with appropriate guidance.
 - arrangements to assess and study any artefacts, assemblages and environment samples.
 - Any artefacts recovered during the watching brief will be deposited with an appropriate museum, subject to the permission of the owner.
- 2.4. Following the on-site work an illustrated report will be prepared containing conventional sections to include:

-
- Non-technical summary
 - Introduction
 - Site location
 - Archaeological Background
 - Watching brief
 - Conclusions
 - References
 - Appropriate appendices on archives and finds
- 2.5. The report summary will be provided in English and Welsh, in accordance with the *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs) V1* (July 2018). The report will be submitted to the Welsh Ministers for approval within eight weeks of the completion of the on-site works.

Site archive

- 2.6. The overall archive will conform to guidelines described in *Management of Research Projects in the Historic Environment* (MoRPHE), Historic England 2015, the CIfA (2014) *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* and *The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales* (NPAAW, 2017).
- 2.7. The paper and digital archive will be deposited with the National Monuments Record (NMR), RCAHMW, including a copy of the final report. This archive will include all written, drawn, survey and photographic records relating directly to the investigations undertaken. A copy of the digital archive only will also be lodged with the Historic Environment Record, Clwyd-Powys Archaeological Trust.

3 Resources and programming

- 3.1. The watching brief will be undertaken by a skilled archaeologist under the overall supervision of Nigel Jones, a senior member of CPAT's staff who is also a member of the Chartered Institute for Archaeologists (CIfA). CPAT is also a CIfA Registered Organisation and as such agrees to abide by their *Code of Conduct* (2014) and the *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* (2014).
- 3.2. All report preparation will be completed by or with the assistance of the same field archaeologist(s) who conducted the site work. Copies of the report will be deposited with the client and the regional Historic Environment Record within one month of the completion of on-site works. If appropriate, a short report will be published in *Archaeology in Wales*.
- 3.3. The client should be aware that in the event that significant archaeological remains are revealed there may be a requirement for more detailed excavation and specialist services. Any further work over and above the original watching brief and report would be the subject of a separate WSI and costing. The following figures provide an indication of the types of additional services and indicative costs which might be required, for which the client is advised to make some provision.

Curatorial monitoring	£150 per visit
Finds conservation etc	£285 per day
Radiocarbon dating	£330 each
Finds specialist	£285 per day

- 3.4. Requirements relating to Health and Safety regulations will be adhered to by CPAT and its staff.
- 3.5. CPAT is covered by appropriate Public and Employer's Liability insurance, as well as Professional Indemnity insurance.

N W Jones
7 August 2019



Fig. 12 Plan of the development area