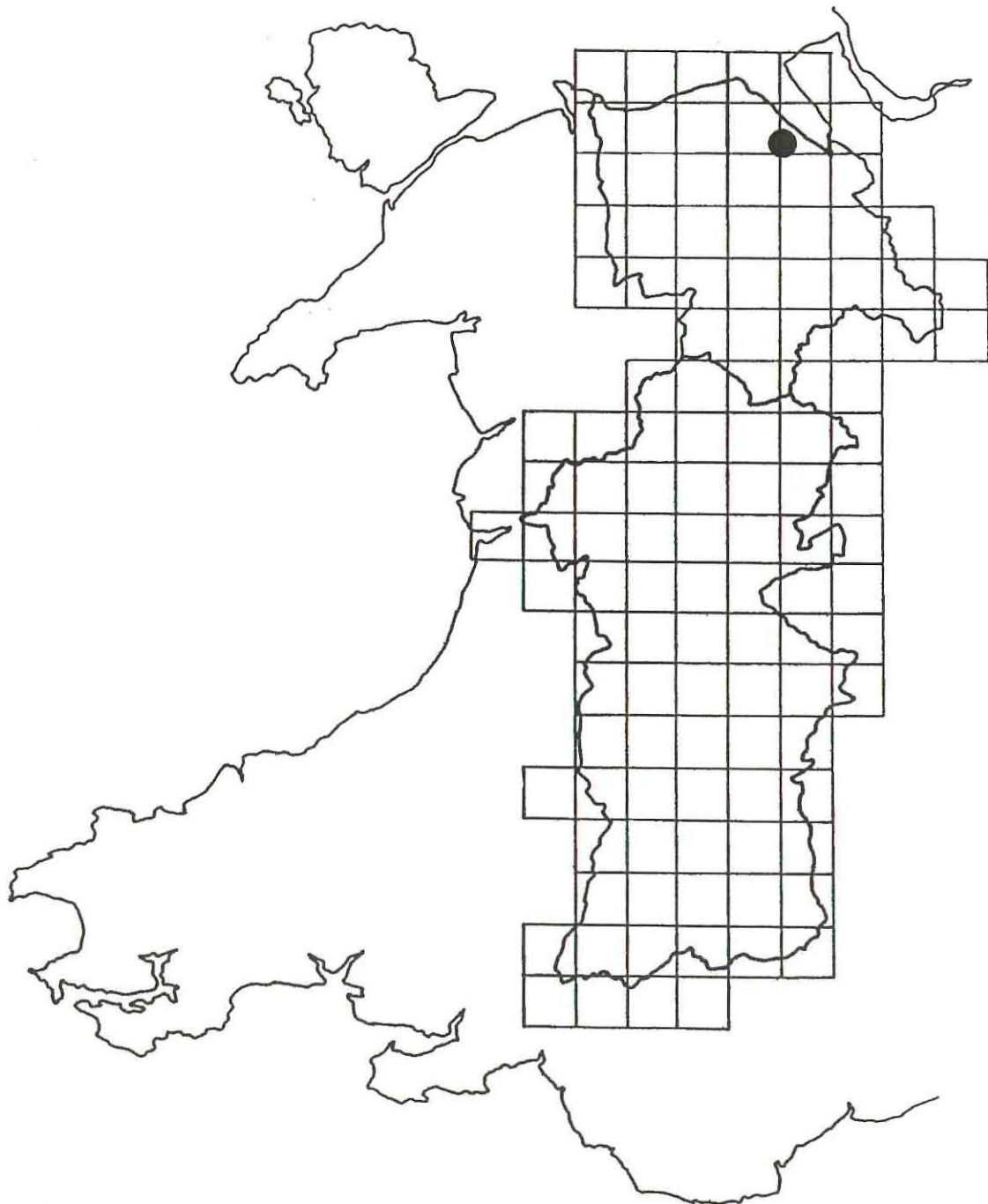


Mount Pleasant - Fferm Water Main, Clwyd

ARCHAEOLOGICAL EVALUATION



CPAT Report No 113

Mount Pleasant - Fferm Water Main, Clwyd

ARCHAEOLOGICAL EVALUATION

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Report prepared for Dwr Cymru/Welsh Water

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1 Introduction

1.1 In September 1994, the Clwyd Powys Archaeological Trust (CPAT) was asked by Dwr Cymru/Welsh Water to provide a quotation for a preliminary archaeological assessment of a proposed water main between Maes Gwyn Bridge (SJ 2339 7122) and the existing Fferm Reservoir (SJ 2163 7356), to the south and west of the town of Flint in Clwyd.

1.2 The assessment had been recommended by the Curatorial Section of CPAT, acting as the archaeological curator for the area. The brief (EVB 123) prepared by the Curatorial Section detailed a two stage assessment, comprising a desk-top study and rapid field survey.

1.3 Dwr Cymru/Welsh Water commissioned CPAT to carry out the work at the beginning of October 1994, and the two elements specified were carried out within the same month. This report was prepared immediately afterwards.

2 Geographical Background

2.1 The north-western terminal of the pipeline route is the Fferm Reservoir (SJ 2163 7356) at an elevation of 115m OD. From this point the pipeline follows a south-easterly route past Cornist (Ganol) Farm and along a public footpath to the north-east of Maes-gwyn-mawr until it reaches its south-eastern terminal. This is at Maes Gwyn Bridge, where the confluence of Nant-y-Flint and the Afon Conwy form the Swinchiard Brook, at an elevation of 45m OD. Throughout much of its length the route occupies the north-east facing slopes of the ridge to the north-east of the Nant-y-Flint valley.

2.2 The solid geology of the area is most probably encompassed within the millstone grit of the Carboniferous period, which occurs between the limestones of the Halkin Mountain area and the coal measures exploited near the coast at Flint. In this immediate locality the solid geology is covered by a layer of reddish till of glacial origin, the soils derived from this till are slowly permeable, seasonally waterlogged, coarse and fine loamy soils of the Clifton Soil Association (Rudeforth et al 1984).

3 The Desk-top Study

3.1 The desk-top study is based on the Sites and Monuments Record (SMR) for the county held by CPAT. Documentary sources held by the National Library of Wales, Aberystwyth (NLW), the Clwyd Record Office, Hawarden (CROH), and the National Monument Record (NMR) of the Royal Commission on Ancient and Historic Monuments in Wales, Aberystwyth were consulted. Cartographic sources held at NLW and CROH were also examined together with aerial photographic collections held by the NMR and the Architects Technical Planning Library, Clwyd County Council, Mold.

3.2 The area examined by the desk-top study has been limited to a 200m wide corridor which is specified in the brief for the field survey. In this area the SMR records a total of four sites, these have been included with the sites which have been revealed by this assessment in the gazetteer of sites (Section 9), in order of Primary Record Number (PRN).

3.3 At the present time the assessment corridor falls within the community of Flint, however, the majority of documentary and cartographic evidence relates to the township of Coleshill Fawr in Holywell parish, to which the area formerly belonged.

4 The Field Survey

4.1 On completion of the desk-top study, the field survey of the 200m wide corridor was undertaken using the transect walking methods specified in the brief. In addition to prospecting for new, previously unrecorded sites, those sites which were revealed by the desk-top study were visited. Any site recognised was photographed, drawn and recorded as appropriate.

4.2 Two fields within the corridor had been recently ploughed and seeded, and in order to prevent potential crop damage these were examined from their boundaries. The examination in both cases was carried out from the approximate line of the proposed pipeline; no features or indicative finds were seen.

5 The Assessment Corridor within its wider Archaeological Context

5.1 The known archaeological resource of the assessment corridor is almost exclusively related to the agricultural use of the area; the only evidence of industrial activity is the cast iron object (PRN 19574) which may have originated at the nearby Gadlys lead smelting works.

5.2 At present, the evidence of prehistoric occupation in the immediate area is limited; the only possible sites recorded are PRN 100338, which has been suggested as a round barrow, although the preferred interpretation in the SMR is that it is an early medieval motte or earthen castle, and a possible Iron Age settlement (PRN 19300) seen on an aerial photograph at SJ 235 713 (Jones 1980). The locations to be found along the route, however, are favourable for occupation and other related activity, as well as the burial of the dead, throughout the prehistoric era. However, it seems probable that the intensity of subsequent cultivation (see paras 5.5 and 5.6) has been too great to allow the survival of surface traces of prehistoric activity.

5.3 The precise alignment of Wat's Dyke has yet to be determined in this locality (see PRN 106609 in section 9). There is little doubt that most of the assessment area would have fallen within the sphere of Mercian (English) control, as defined by the dyke, during the Dark Age.

5.4 Apart from PRN 100338 noted above, two medieval earthen castles occur in the locality; these are Hen Blas motte and bailey (PRN 100339) at SJ 2214 7344, and Bryn-cwn motte (PRN 100318) at SJ 2383 7145. The number of defensive sites in this relatively small area is indicative of the disputed nature of the territory during this period.

5.5 The area in which the assessment corridor falls contains features which are related to medieval agriculture. The most notable of these is an extensive former open field system, to the south-west of the town of Flint. Plough land was recorded in Coleshill township by the Domesday Book (Sylvester 1954-55), and strips which constituted the common arable fields in the Middle Ages have been fossilised by the planting of hedgerows in a later period. Medieval cultivation of the open-field strips led to the creation of ridge and furrow, but only one ridged area was recognised in the assessment corridor; other areas have undoubtedly been erased by later agricultural activity.

5.6 A number of the enclosed fields contain a marl or clay pit, most probably used to provide fertiliser. On occasion pits lie on opposite sides of a hedgerow (eg PRNs 19570 and 19571), suggesting that the enclosure of the open fields occurred prior to the digging of the pits. Marling, although evidenced in medieval times, came into fashion in the 18th century (Rackham 1986).

5.7 The houses which can be found in the locality are dispersed farmsteads, probably of post medieval or early modern date. However, the medieval settlement pattern of this part of Clwyd was essentially one of dispersed farms and it is quite likely that many post-medieval buildings were constructed on earlier farm sites. Castell Noble (PRN 101638) may have been one of these farmsteads. Its land became amalgamated with the nearby Ffrith Farm when it was demolished, reputedly during the 1950s.

5.8 A number of small limekilns, possibly for local agricultural use, were once extant throughout the locality, but the majority of these appear to have succumbed to later agricultural improvement.

5.9 The assessment area, as has been noted in para 5.1, is apparently devoid of industrial activity. However, the Gadlys lead smelting works were located nearby (see gazetteer entry for PRN 19574), and another possible smelting works was shown at approximately SJ 2270 7300 on a map of 1740 (NT/M/28) held by the Clwyd Record Office, Hawarden. These and perhaps other works seem to have occupied the strip of ground between the outcrop of the Flintshire coalfield to the north-east and the lead bearing Carboniferous limestones to the south-west, along which the proposed pipeline runs.

6 Archaeological Impact of the Present Proposals and Recommendations

6.1 In addition to specific sites which have been recognised by this assessment, the topography of the area suggests that the assessment corridor may potentially contain previously unknown sites for which no surface traces remain. It is recommended that the pipeline wayleave be examined once the topsoil has been stripped away and before the area has been subjected to the passage of site traffic.

6.2 The sites detailed below (for further information, see section 9) are within the proposed pipeline wayleave and merit further archaeological input during the site works. It does not appear that any of the sites are sufficiently important to warrant alterations to the course of the pipeline.

PRN 19574 It would be preferable for this artefact not to be damaged by the proposals if it was once used in the nearby Gadlys smelting works. Either removal to another location or minor avoidance could be considered.

PRN 101638 No surface traces of the house remain, but it is recommended that a watching brief be maintained during topsoil stripping and trenching. Further information on the house and its dating may be obtained.

PRN 102706 The present interpretation of this site is that it is may be natural in origin. A watching brief during topsoil stripping and trenching may confirm or refute this hypothesis.

PRN 106609 The line of Wat's Dyke has not been confirmed at this location. A watching brief during topsoil stripping and trenching may locate the line of its associated ditch, if the dyke formerly existed in this area.

7 Conclusions

7.1 Present knowledge about the archaeology of the assessment corridor suggests that the impact of the pipeline works will be low. None of the confirmed sites within the corridor can be classed as nationally or regionally important in the light of present knowledge. The fossilised medieval open field system is of general archaeological interest but is unlikely to be significantly affected by the pipeline trenching works.

8 Acknowledgements

8.1 The writer would like to thank the landowners along the route of the pipeline for permission to cross their land, and the staff of the following organisations for their help and assistance:

the Architects Technical Planning Library, Clwyd County Council, Mold for permission to view their aerial photographic collection

the National Monument Record, RCAHMMW, Aberystwyth

the Clwyd Record Office, Hawarden

the National Library of Wales, Aberystwyth

the SMR at the Clwyd Powys Archaeological Trust

9 Gazetteer of Sites within the Assessment Corridor

9.1 This gazetteer contains sites within the SMR held by CPAT, and sites discovered by the desk-top study and field survey. The sites are ordered by primary record number (PRN), and are marked on the accompanying plan (Fig 1).

9.2 Occupied houses within the corridor are not included in the list of sites; none of the houses has been previously considered to be of particular architectural importance and it is assumed that no significant disturbance to their fabric will be considered as part of this scheme of pipeline installation works.

PRN 19564 Ridge and furrow cultivation (SJ 2210 7313). An area of ridge and furrow cultivation seen on aerial photographs dated 9/3/1948, 13/6/1974 and 2/6/1985. It is not readily apparent on an aerial photograph taken on 6/7/1992, which perhaps suggests that it had been levelled in the intervening period. It was not evident when the field survey was carried out.

PRN 19565 Soilmark (SJ 2214 7293). An approximately disc-shaped soil/cropmark, c20m diameter, visible on aerial photographs taken on 9/3/1948 and 13/6/1974. In view of the number of clay/marl pits in the area, it seems likely that this is a filled-in example. The field had been ploughed and seeded prior to the field survey, and the exact location was not visited to prevent disturbance of the crop.

PRN 19566 Limekiln (SJ 2201 7292). A limekiln depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1870-71, to the south of the road running past Castell Noble. No traces of the site were recognised during the field survey.

PRN 19567 Well (SJ 2197 7312). A well depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1870-71. It is also shown on the Ordnance Survey 1:10560 map of 1969. The narrow dingle in which the well is shown is very overgrown and it was not possible to confirm the presence of the site.

PRN 19568 Clay/marl pit (SJ 2260 7195). A pit or hollow depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1870-71. Also visible on aerial photographs taken on 13/4/1947 and 9/3/1948. Its location is still apparent as a slight hollow, but it has been largely filled in.

PRN 19569 Clay/marl pit (SJ 2283 7198). A pit or hollow depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1870-71. The field visit confirmed that it has been subsequently filled in.

PRN 19570 Clay/marl pit (SJ 2287 7190). A pit or hollow depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1870-71. Its location is still apparent as a slight hollow, but it has been largely filled in.

PRN 19571 Clay/marl pit (SJ 2289 7189). A dry hollow depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1870-71. The pit is still extant although it is presently used as a

dump and is overgrown; its dimensions are 25m north-east/south-west x 15m north-west/south-east x 2m deep.

PRN 19572 Clay/marl pit (SJ 2278 7177). A pit or hollow depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1870-71. Two dry hollows, each approximately 15m in diameter x 1m deep, are located in this position.

PRN 19573 Possible House (SJ 2280 7192). The map of 1740 (CROH - NT/M/28) appears to show two buildings in this location. The relative lack of accuracy of this map makes the definite location of these buildings uncertain, but comparison with surviving landscape features suggests that this is the most likely location. No traces of any structures or their remains were evident when the location was visited.

PRN 19574 Cast Iron Object (SJ 2177 7313). A bowl-shaped cast iron object with a flanged rim, approximately 1.5m in diameter x 0.7m deep, now used as a water trough. The flange is mostly broken, but two bolt holes are still evident. The location of the object is approximately 1km to the south-south-east of the former lead smelting site at Gadlys, and it is perhaps possible that the object was re-used when smelting at Gadlys ceased.

The object is probably too large to have been a lead collecting pot used in the smelting process, but it seems to be of an equivalent size and nature to the cast iron "kettles" or pots used in the 'Pattinson' process for the enrichment of silver in lead, patented in 1833 (depicted in Tylecote 1976, p138). Dimensions of 5ft 6in (1.65m) diameter x 2ft 6in (0.75m) depth for the pots are specified in a book describing manufacturing processes of the late 18th century (Anon, 1877).

PRN 19575 Limekiln (SJ 2158 7356). Limekiln depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1871, located on the south side of the lane leading past Fferm. The kiln is no longer extant; its location is within the enclosure of the Fferm Reservoir.

PRN 19576 Clay/marl pit (SJ 2157 7346). A dry hollow, 22m north-east/south west x 15m north-west/south-east x 2m deep, cut into a north-east facing slope.

PRN 19577 Clay/marl pit (SJ 2163 7333). A dry hollow, 60m north-east/south west x 30m north-west/south-east x 2.5m deep, cut into a north-east facing slope.

PRN 19578 Clay/marl pit (SJ 2202 7300). Two pits or hollows depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1870-71 and also shown on the Ordnance Survey 1:10560 map of 1969. Only one of the pits now remains; this is evident as a water filled hollow, 30m north-west/south-east x 20m north-east/south-west x 1.5m plus deep.

PRN 101638 Castell Noble (SJ 2203 7300). The site of a house reputedly demolished in the 1950s. Earthwork traces of the foundations remained at the time of its recording in the SMR, where it is noted as being extant during the tithe survey of 1837. The desk-top study shows that the house was depicted on a map of 1824 (CROH - D/DM/136/5d), but was not shown on a map of

the area drawn in 1740 (CROH - NT/M/28); it seems likely that it was built between these dates, but the relative lack of accuracy of the 1740 map does not preclude it from being extant at that time. No obvious traces of the house can now be seen, apart from the remains of its boundary hedge.

The name "Castell" or castle may be suggestive of a former defensive structure, as the site is near the top of a local summit. However, no remains have been detected by either the desk-top study or field survey, and the name may be a reference to the elevated position of the site or a peculiarity in the construction of the former dwelling.

PRN 102706 Maes Gwyn Mawr Mound (SJ 2323 7138). A large mound noted in the SMR as being between 8m and 12m high x 70m in diameter, with a possible bank and ditch encompassing the eastern perimeter; it is considered to be a possible motte or glacial feature. When the site was visited during the field survey, it was considered that the most likely explanation for the topographical features was that the mound was of natural origin, and the bank and ditch marked the position of a now redundant field boundary.

PRN 104025 Cornist Ganol Limekiln (SJ 2246 7217). The site of a former limekiln which is depicted on the first edition Ordnance Survey 1:10560 map, surveyed in 1870-71. The SMR notes that its position is occupied by a small earthen mound. No other traces of the structure are evident on the ground.

PRN 106609 Wat's Dyke (Potential alignment crossed by trench at SJ 2332 7125). The putative alignment of Wat's Dyke runs along the north-eastern side of the Nant-y-Flint valley (its existence is confirmed at SJ 213 731 and SJ 216 726), before crossing the stream and running in a southerly direction to the east of the Afon Conwy valley, where its location is confirmed at SJ 2324 6970. No traces of the dyke could be found in the area of the field survey, the field which it is thought to cross is on a steep south-east facing slope and seems to occupy a poor defensive location. However, this does not necessarily confirm that it was not formerly in existence at this location.

10 Sources

10.1 References

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Sylvester D. 1954-55 "Settlement Patterns in Rural Flintshire" Flintshire Historical Society Publications 15 pp6-42.

Tylecote R.F. 1976 A History of Metallurgy The Metals Society London

10.2 Cartographic Sources

10.2.1 At the Clwyd Record Office, Hawarden

1740 NT/M/28 - Map of Flint and Bagillt

1824 D/DM/136/5d - Plan of the township of Coleshill Fawr

10.2.2 At the National Library of Wales, Aberystwyth

1841 Tithe map and Apportionment for Holywell parish

1878 Ordnance Survey first edition 1:10560 map, Flintshire 6SE, surveyed 1871.

1878 Ordnance Survey first edition 1:10560 map, Flintshire 9NE, surveyed 1870-71.

10.3 Aerial Photographic Sources

10.3.1 At the National Monument Record, RCAHMW, Aberystwyth

1947 - CPE/UK/1996/2205

1948 - CPE/UK/2471/4320

10.3.2 At the Architects Technical Planning Library, Clwyd
County Council, Mold

1974 - 32 74 048 and 32 74 077

1985 - 2085 103 and 2085 129

1992 - 107 92 245 and 107 92 276

Annex 1

PROPOSED MAINS PIPELINE BETWEEN MOUNT PLEASANT AND FFERM, NEAR FLINT, CLWYD

SPECIFICATION FOR A COMBINED STAGE ONE AND STAGE TWO ARCHAEOLOGICAL ASSESSMENT TO BE CONDUCTED BY CLWYD-POWYS ARCHAEOLOGICAL TRUST

1.0 Background

1.1 Dwr Cymru/Welsh Water propose to lay a new water main between Maes Gwyn Bridge (at SJ 2339 7122) and the Fferm Reservoir (at SJ 2163 7356) to the south of Flint. This entails work over a 3km-long stretch of countryside and the line passes close to or may even directly affect several known archaeological monuments.

1.2 It is considered by the Curatorial Section of CPAT who maintain the regional Sites and Monuments Record and act as archaeological advisers to Dwr Cymru/Welsh Water that a multi-stage archaeological evaluation is required to assess the archaeology of the pipeline corridor, the later stages to be dependent on the results of the first two stages. The report on Stages 1 and 2 is to be in a form that can be assessed by the archaeological curator who will suggest what if any measures might be required for Stages 3, 4 and 5.

1.3 These aspects have been covered in a Brief (CPAT EVB 123) prepared by the Curatorial Section of the CPAT.

2.0 Objectives

2.1. The objective of the first stage of the evaluation is to establish from desk-top study all recorded sites of archaeological interest in the vicinity of the proposed mains pipeline.

2.2 The fieldwork element of the evaluation is defined as Stage 2 and is designed to record in appropriate detail the archaeology of the same area.

2.3 The analysis and integration of data from the desk-top and fieldwork elements will aim to provide a firm basis for assessing the archaeological implications of the pipeline scheme.

3.0 Methods

3.1 The desk-top assessment will involve the examination of primary and secondary source material including early maps, the Clwyd County Sites and Monuments Record and vertical aerial photography.

3.2 Fieldwork will take the form of a structured and methodical field examination of the pipeline corridor.

3.3 Following 3.1 and 3.2 an analysis of the desk-top and fieldwork data accompanied by an appropriate plan will be prepared as a draft report for the client.

4.0 Resources and Programming

4.1 The desk-top assessment and fieldwork will be conducted by an experienced field archaeologist from CPAT under the supervision of the Deputy Director of that organisation.

4.2 All report preparation will be completed by the same field archaeologist who conducted the fieldwork.

4.3 It is anticipated that the desk-top assessment and the fieldwork together with a draft report covering these elements (and representing Stages 1 and 2 as outlined in the curatorial brief) will be completed within two weeks of the commencement of the project. It is anticipated that the project could be commenced within one calendar month of CPAT's quotation being accepted, dependent on such variables as the weather, access and CPAT's other commitments.

R. J. Silvester
26 September 1994

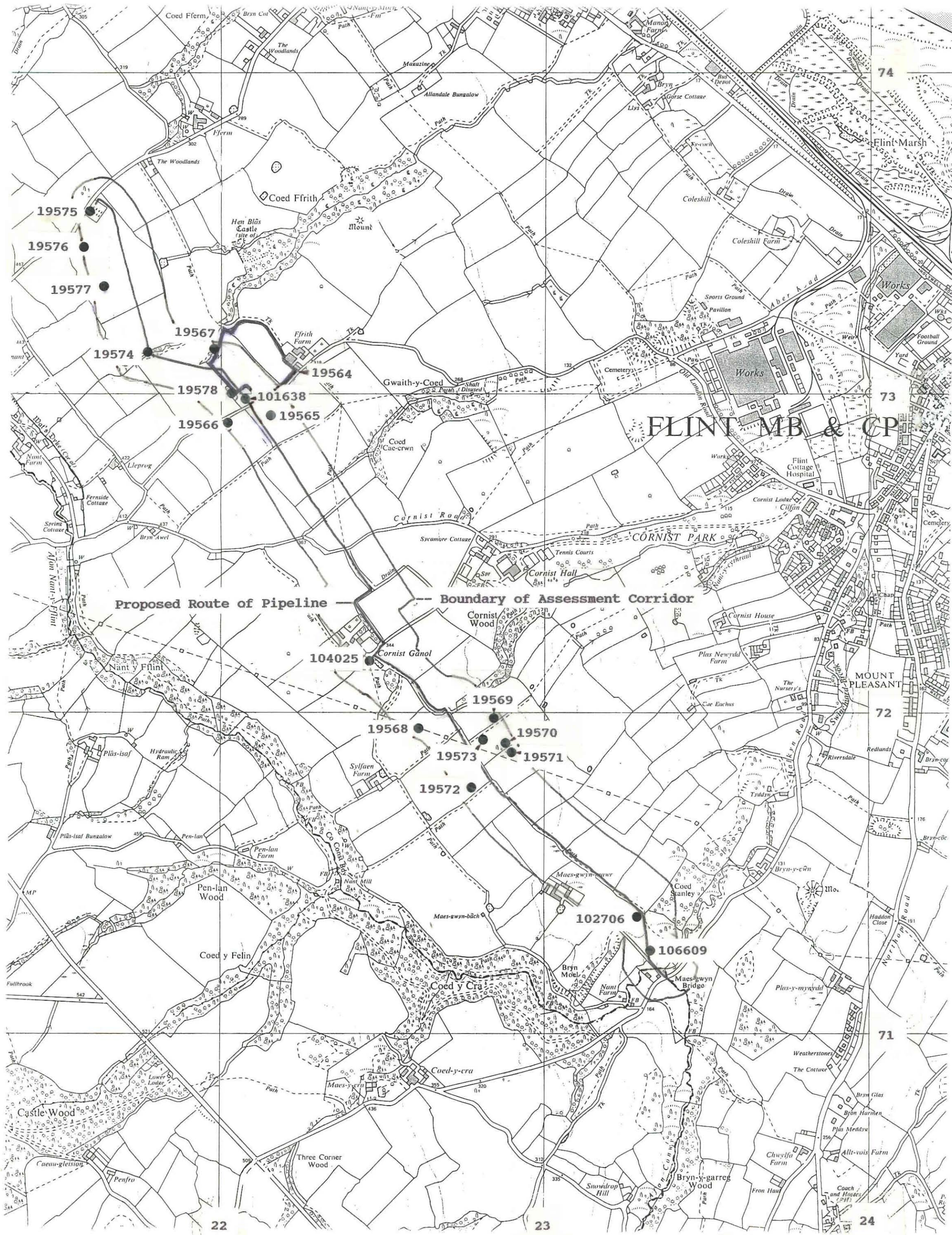


Fig 1 Assessment Corridor and Archaeological Sites
Scale 1:10000

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