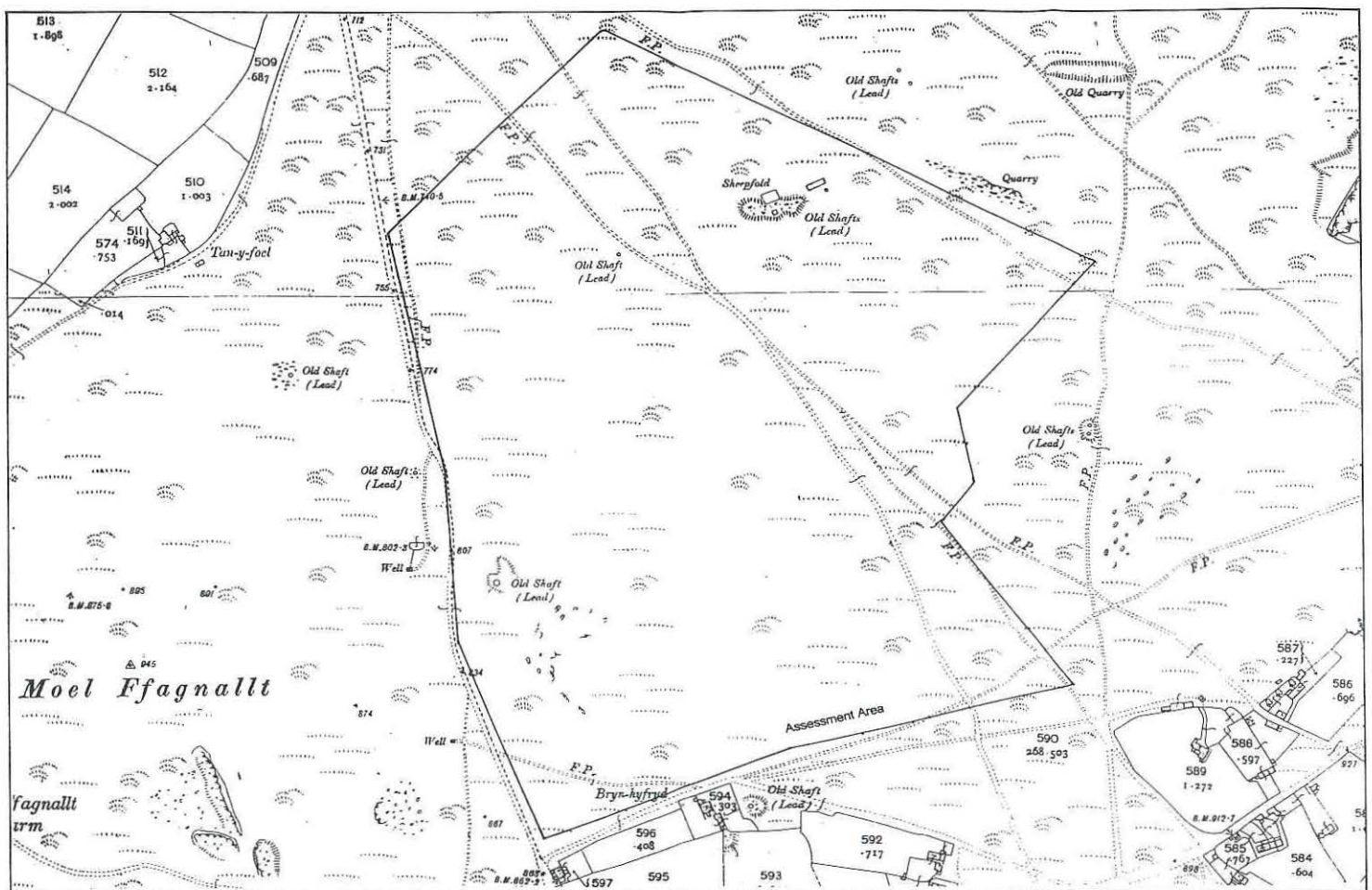


THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

Pant Quarry, Halkyn, Flintshire
ARCHAEOLOGICAL ASSESSMENT



CPAT Report No 280

Pant Quarry, Halkyn. Flintshire
ARCHAEOLOGICAL ASSESSMENT

N.W.Jones, R.Hankinson & P.Frost
December 1998

Report for ASH Consulting Group

The Clwyd-Powys Archaeological Trust

7a Church Street, Welshpool, Powys, SY21 7DL
tel (01938) 553670, fax (01938) 552179

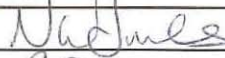
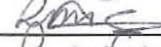
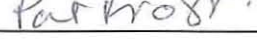
© CPAT 1998

CPAT Report Record

Report and status

CPAT Report Title	Pant Quarry, Halkyn. Flintshire		
CPAT Project Name	Pant Quarry, Halkyn. Flintshire		
CPAT Project No	786	CPAT Report No	280
Confidential (yes/no)		draft/final	FINAL

Internal control

	name	signature	date
prepared by	N.W.Jones		3/12/98
	R. Hankinson		3/12/98
	P.Frost		3/12/98
checked by			
approved by	R.J. Silvester		4/12/98

Revisions

no	date	made by	checked by	approved by

Internal memo

The Clwyd-Powys Archaeological Trust

7a Church Street Welshpool Powys SY21 7DL

tel (01938) 553670, fax 552179

© CPAT

Tarmac Quarry Products Limited
December 1998

Clwyd-Powys Archaeological Trust

CONTENTS

- 1 INTRODUCTION
- 2 METHODOLOGY
- 3 BASELINE CONDITIONS
- 4 RECOMMENDATIONS
- 5 SOURCES

APPENDIX 1: GAZETTEER OF ARCHAEOLOGICAL SITES WITHIN ASSESSMENT AREA

APPENDIX 2: GAZETTEER OF ARCHAEOLOGICAL SITES WITHIN IMMEDIATE AREA

APPENDIX 3: SPECIFICATIONS

Fig. 1 Archaeological Sites within immediate area, scale 1:12,500

Fig. 2 Archaeological Sites within Assessment Area, scale 1:2,500

Fig. 3 Ordnance Survey 1st edition 1:2,500 published 1875, Flintshire 9.6 and 9.10

Fig. 4 Ordnance Survey 3rd edition 1:2,500 published 1912, Flintshire 9.6 and 9.10

Plate 1 Site 1

Plate 2 Sites 1 and 2

Plate 3 Site 7

Plate 4 Site 10

Plate 5 Sites 25, 26 and 27

Plate 6 Site 46

1 INTRODUCTION

- 1.1 On the 14th May 1998, the Contracting Section of the Clwyd-Powys Archaeological Trust (hereafter CPAT Contracts) was asked by ASH Consulting Group of Old Hall St, Liverpool to provide a cost estimate for the archaeological assessment of proposed alterations to Pant Quarry, Halkyn, Flintshire (SJ 20007030).
- 1.2 The work required was the subject of a brief prepared by ASH Consulting Group, following consultation with the Curatorial Section of CPAT. The brief specified an initial desk-top study and walkover survey (Stage 1) of the quarry development area and its surroundings, in order to define the existing archaeological baseline conditions of the proposed development. Further work to evaluate the existing archaeological sites and define potential impacts (Stage 2) was also specified in the brief.
- 1.3 This interim report is only intended to define the existing baseline conditions and covers Stage 1, as defined in the brief.

2 METHODOLOGY

- 2.1 The desk-top study comprised the examination of readily available primary and secondary documentary, cartographic, and aerial photographic sources. The repositories accessed by the study were:
 - The Regional Sites and Monuments Record (SMR) held by CPAT, Welshpool.
 - The National Monument Record (NMR) of the Royal Commission on Ancient and Historical Monuments (RCAHMW), Aberystwyth.
 - The National Library of Wales (NLW), Aberystwyth.
 - The Flintshire Record Office, Hawarden (CROH).
- 2.2 In addition to the above, published works were examined for relevant information. These included the journal of the Flintshire Historical Society and works relating to the mining history of the area.
- 2.3 Following completion of the desk-top study, a transect survey of the area of the proposed development was carried out. This was intended both to evaluate the survival, nature, and possible dating of features revealed by the desk-top study, and to prospect for previously unknown sites. The survey was carried out using standard transect walking techniques, with a transect width of approximately 30m. Any archaeological sites encountered were described, sketched, measured and photographed, as appropriate. All sites have been located on Fig. 2, although it should be noted that sites have been sketch plotted using a combination of information visible on RCAHMW aerial photograph 935137-41 and rapid recording

undertaken during the transect survey. It will therefore be readily apparent that the locations given to sites are not exact and should only be considered as approximate.

- 2.4 One notable limitation to the desk-top study concerning access to relevant documents was encountered, involving the Grosvenor (Halkyn) manuscripts held by the Flintshire Record Office in Hawarden. Access to the collection is restricted, and permission to view any records must be obtained from the Duke of Westminster. Insufficient time was available to obtain permission within the project deadline, and consequently the records were not accessed. The Grosvenor (Halkyn) maps and documents in the Flintshire Record Office catalogue which appear to relate to the development area are specified in the list of sources given below in Section 5, and it would be preferable for time to be made available for these sources to be viewed, although it should be noted that the necessary permission from the Duke of Westminster cannot be guaranteed.
- 2.5 It is apparent from examination of aerial photographic sources and consideration of adjacent areas during the field survey, that archaeological evidence within the development area has been obscured or obliterated by subsequent agricultural improvement. At least two areas of ridge and furrow cultivation, and one area of mining, are clearly visible bordering the northern side of the assessment area, but these are not visible in the adjacent section of the development area. In addition, the concentration of mining remains, including shaft mounds and former openworkings, which are visible to the north of the development area, also suggests that the development area may have been more actively utilised than it now appears.
- 2.6 Within the gazetteer of archaeological sites present in the assessment area (Appendix 1) is a classification of the site's perceived importance. The importance assigned follows the guidelines set out in section 4.7.3 of Cadw's draft *Archaeology and the Trunk Road Programme in Wales: a Manual of Best Practice*. The criteria applied to each classification are described below:
- A Sites designated as being of national importance or which meet the criteria for scheduling or listing. It is presumed that sites in this category will be preserved and protected *in situ*.
 - B Sites of regional or county importance which do not meet the criteria for scheduling or listing, but which are nevertheless of particular importance within the region. Preservation *in situ* is the preferred option for these sites, but if loss or damage is unavoidable, appropriate detailed recording should be undertaken.
 - C Sites of district or local importance which are not of sufficient importance to justify preservation if threatened, but which merit adequate recording in advance of loss or damage.
 - D Minor and damaged sites which do not merit inclusion in a higher category, and for which rapid recording should be sufficient.
 - E Sites whose importance could not be fully determined from the desk-top assessment and field search. These sites would need to be subjected to evaluation in a following

stage of work if it is envisaged that they will be disturbed by implementation of the proposal, in order that they can be assigned to Categories A-D.

F Previously recorded sites for which no traces now survive.

2.7 GLOSSARY OF TERMINOLOGY

ADIT - Level driven into the hillside to provide access or drainage to a vein.

CROSS-COURSE - Major fault at right angles to the general trend of veins.

DRIVING - Act of advancing a tunnel.

FAULT - Displaced break in the earth's surface, which may or may not contain minerals.

LEAT - Artificial watercourse.

LEVEL - Horizontal entrance/passage in a mine.

LODE/ VEIN/ RAKE - Mineralised faults.

ORE - Mineralised rock.

PORTAL - Surface entrance to adit or level.

SETT - Area leased by a mining company.

SHAFT - Vertical or near vertical passage in a mine, often driven from the surface.

SPOIL - Waste material from mining or dressing of ores.

TRANSECT SURVEY - Progressive examination of an area of land by walking along parallel lines, separated from each other by the transect width (generally 30m).

WHIM CIRCLE - Circular feature defining the site of a horse-powered windlass for winding ore from the shafts.

3 ARCHAEOLOGICAL BASELINE CONDITIONS

3.1 The archaeological evidence relating to the assessment area and its surroundings is analysed within this section and has been divided into mining and non-mining categories for ease of reference. Detailed gazetteers of the archaeological sites present within the assessment area (Appendix 1) and in the surrounding area (Appendix 2), are given below.

3.2 Mining evidence

3.2.1 The most important lead and zinc orefield in Wales lies in the upland region between the Clwydian Mountains and the Dee Estuary. The area, generally known as Halkyn Mountain, forms part of the Carboniferous Limestone Belt which runs south from Prestatyn to Hope Mountain and the northern side of the Bala Fault. The present study area is part of the intensive workings on Halkyn Mountain which fall into the category of an Historic Mining Landscape.

3.2.2 Halkyn mining landscape forms the southern extent of an area of continuous workings, which extend south-east from Gorsedd to Moel y Gaer Hillfort (PRN 100296). The central areas of

the ancient common, which once covered nearly 810 hectares, comprise dense concentrations of shafts forming rows of workings following generally trending east/west veins and north/south cross-cuts.

- 3.2.3 The area bears valuable evidence for one of the oldest industries in north-east Wales, dating from at least the Roman period. Convincing evidence of the precise location of lead extraction by the Romans on Halkyn Mountain has yet to be established. Archaeological evidence suggests that lead may have been carted from the mountain to the shores of the Dee estuary for smelting during the Roman period. Excavation in the Pentre Oakenholt area of Flint (O'Leary *et al.* 1989) has provided evidence of lead smelting, presumably from ores gained from Halkyn mines.
- 3.2.4 Documentary evidence is spasmodic until the late 17th century although mining certainly took place as early as the 13th century, when lead was in demand for roofing the newly constructed Edwardian castles (Williams 1994, 62). The Black Prince's Registers of the c.1350s record the codes of law and privileges of the freeminers of Englefield, which encompassed the Holywell-Halkyn area. In 1634, Charles I granted to Sir Richard Grosvenor all the mines of lead in the hundreds of Coleshill and Rhuddlan, and thus the Grosvenor Estate became the owners of extensive mineral rights, which included Long Rake and most of the richest veins in the north-east Wales orefield. The earliest known Grosvenor Estate Map showing Halkyn Mountain resulted from a survey by Thomas Badeslade in 1738 (CROH D/GR/1679). It is not available for examination at present but is known to show the buildings, lead works and veins, now part of the estate and includes Long Rake, which survives as runs of shafts and open-cuts, characteristic of early workings.
- 3.2.5 The London Lead Company, or the Quaker Company as they were more commonly referred to, became involved with mining in Flintshire from c.1695. In 1698 they were already involved in disputes with the Grosvenor Estate over mining on Old Rake, Halkyn (PRN 18146), one of the richest veins on the mountain. Rich ore was being wound up in baskets at Old Rake and Long Rake, where by 1701 they had a building which include a smithy, count-house, store room for ore, lodging for their agent and a chimney to provide heating for the convenience of the miners in winter. The Quakers brought about a more organised form of mining to the mountain; dressing of ore was taking place at the mine and ore being carted to their new smelting-house at Gadlys, which was in production by 1704. The company worked on Halkyn for c.100 years, introducing several technological innovations such as a windmill for pumping out water and winding ore at Pant-y-pwll-dwr Rake, followed later by the installation of a Newcomen Engine House by 1729, one of the first of seven to be installed by them on Halkyn. The Quaker interests on Halkyn included Old Rake, Long Rake, and Moel-y-crio (PRN 18130) and recorded shafts were already sunk to c.60m depth by the 1720s (Bevan-Evans 1960; 1961; 1962). These veins were worked intensively from the 17th century and the close proximity of the workings on east to west veins and their cross-courses are best revealed on aerial photographs.

- 3.2.6 Intensive mining during the medieval period led to the exhaustion of the surface outcrops by the early 17th century. Deeper mining was more expensive and drainage costs increased as workings sank below the natural drainage level. Several smaller adits were driven by individual companies, but two major drainage tunnels were cut through the mountain. The Halkyn Deep Level Tunnel was driven initially by the Grosvenors in 1818 from Nant-y-Fflint, and in 1875 the tunnel was taken over by the Halkyn District Mines Drainage Company and the mines along its course were re-worked as well as drained. The tunnel drained the mines on the south-east side of the mountain, such as New North Halkyn and Mount Halkyn, before continuing south towards Hendre and Llyn-y-Pandy. In 1897 a group of mine companies formed the Holywell-Halkyn Mining and Tunnel Company and began to drive the Milwr Tunnel from the Dee Estuary at Bagillt. It cut across the centre of the orefield in a north-south direction and eventually reached the Mold Mines by 1957, draining and re-working all the veins along its course.
- 3.2.7 Thousands of shafts were located during the shaft capping programme undertaken in the 1970s by Clwyd County Council. Derelict Land Reclamation Schemes involving shaft capping, infilling and disposal of large-scale waste, have levelled much of the late 20th century workings, particularly in the area to the south-west of Halkyn Village, which included the workings of Halkyn District United Mines on the Pant-y-gof Vein.
- 3.2.8 Halkyn Mountain today provides earthwork evidence of leats and reservoirs, some still holding water, which would have served the dressing floor areas. Small cottages and mine offices have been converted to modern dwellings and the stonework foundations of other buildings are visible together with several large horse whim circles. The mine sites in unimproved areas are generally overgrown, and dense vegetation may mask the presence of foundations of engine houses and associated mine buildings such as mine offices, stables, smithies, stores and magazines, together with processing areas, tramways, reservoirs and leat systems and possibly miners' housing. Some of these may be visible perhaps only as grassed-over mounds.
- 3.2.9 Generally, archaeological evidence in the areas of the most intense workings consists mainly of shallow workings and open-cuts along the veins, signs of prospecting for ore, deeper stone-lined shafts, some ladder shafts and isolated horse whim circles. In the undeveloped areas, the historical value of the landscape is in the workings themselves. They bear evidence of the richness of the veins and cross-courses, where activity was centred on winning and removing the ores rather than dressing them on site. Most of the orefield is common land now returned to rough pasture, which is dissected by a multitude of tracks.
- 3.2.10 Pant Quarry partly overlies the workings of Moel-y-crio Mine, which worked the western end of the east-west trending California and Pant-y-gof Veins, entering returns for 1886-1913. The peak period appears to have been 1896, when 12 men were employed underground and four on surface work (Burt et al 1992, 66-7). The mine was later incorporated into the Central Halkyn Mining Company from 1901-1910, when the Moel-y-

crio shaft (SJ 2015 6982) was extended to 198 yard level (Smith 1921, 69). The site of the main shaft is located as a spoil mound to the east side of Mount Cottage outside the southern boundary of the Quarry. The shaft was unrecorded by the OS in 1869 but appears on the 2nd edition OS map as the main shaft of Moel-y-crio Mine. By 1912 when the 3rd edition appeared, it is recorded with an engine house on its south side and was worked by the Central Halkyn Mining Company.

- 3.2.11 Smith (1921, 69) records the Pant-y-gof Vein running in a north-easterly direction from Moel-y-crio Mound (PRN 102487) through the Pant-y-gof Mine (PRN 18073) towards the Deep Level Lode and appears to be located south of the California workings. The Pant-y-ffrith cross-course was worked in a north/south direction intersecting the California and Pant-y-gof Veins (Smith 1921, 71, Fig.6). The early 19th-century workings on this vein for lead and silver were by the Pant-y-ffrith Company (PRN 18152) but the sett, along with Pant-y-gof and Central Halkyn/Moel-y-crio and New North Halkyn were incorporated into Halkyn Deep Level Mine (PRN 18092) until 1913. At this time the mines were being drained by the Deep Level Drainage Tunnel driven along the vein and intercepting the Pant-y-gof vein at the east end.
- 3.2.12 In the northern sector of the Quarry, the New Westminster Mine main shaft was worked at SJ 2006 7013. The company (1868-9) invested in land not previously mined. One of the veins worked by the Company was the Long Rake. In 1928, Halkyn District United Mines (PRN 18015) took over the earlier setts. The company was the amalgamation of nine old mining companies and two drainage companies. The Deep Level Tunnel was driven from an adit near the Swinchiard Brook (SJ 2290 9110) by the Grosvenor family in 1818. In 1875, when the Halkyn District Mines Drainage Company was formed, the tunnel was extended southwards and levied royalties on the mines at Halkyn that it drained. A second tunnel, the Milwr Tunnel, was begun in 1897 from Bagillt (SJ 2140 7600) by the Holywell-Halkyn Mining and Tunnel Company. The tunnel intercepts the western end of the Pant-y-gof Vein as it crosses the present study area.

3.3 Non-mining evidence

- 3.3.1 Halkyn common is generally grassland with areas of gorse and bracken on which sheep farming pre-dominates. The parish of Halkyn is mentioned in the Domesday Book and many encroachments were made on the common, presumably during the medieval period, resulting in the small villages and hamlets on the periphery such as Pentre Halkyn, Halkyn, Moel-y-crio and Rhes-y-cae. The 1839 Tithe Maps and Apportionments for Halkyn Parish (NLW A/C 993) show the present study area as part of field No.574 - Common. Indeed, the main body of the parish is recorded as common with scattered settlements on the periphery, which include those to the south of the quarry perimeter
- 3.3.2 Prehistoric activity in the area is readily apparent and characterised by the multi-period site of Moel-y-gaer (PRN 100292), which was excavated during the 1970s. Evidence revealed during the excavations of the Iron Age hillfort (PRN 100296) confirmed the additional

presence of Neolithic and Bronze Age occupation. Further evidence of Iron Age occupation is provided by the oval enclosure (PRN 101758) on Moel Ffagnallt (see Figs 3 & 4). Finds of the period have also been encountered within the surrounding area. Of particular interest are a hoard of 8 vessels (PRN 100278), which were dated to the 4th century or later and probably made of bronze, found during the sinking of a shaft on Long Rake in the 18th century.

- 3.3.3 As has been noted above in para 3.2.3, there is a possibility that lead had been mined by the Romans on Halkyn Mountain. No definite evidence of occupation or workings from the period has been encountered, but a possible section of Roman road (PRN 17877) has been recorded at Old Hall, near Halkyn.
- 3.3.4 The settlement of Halkyn itself is thought to date to the medieval period; the church is referred to in the Domesday Book of 1086, although it should be noted that this refers to a building within the old churchyard (PRN 19910). The present church (PRN 19909) is on a different site and replaced a post medieval church (PRN 100345) located on the old site in 1877-8. A crucifixion panel (PRN 102486) thought to have originated from a 14th-century cross has been set in the south buttress of the existing church. Further evidence of medieval occupation is provided by the moated site at Pentre Halkyn Hafod Farm (PRN 17478). Two areas of ridge and furrow cultivation (Site Nos 15 & 16), which are of probable medieval date, have been recognised within the assessment area, suggesting arable use of the common during this period. The find of a 12th-century silver coin (Site No 47) near Bryn Siriol was reported during the field survey. It is likely that much of the occupation in the area would have either have been related to, or supported by, the lead mining on Halkyn Mountain.
- 3.3.5 Post medieval use of the area is likely to have been relatively unchanged from that present during the medieval period, being based on the mining industry supported by small-scale agriculture and associated land-uses. Limestone quarries and kilns demonstrate that lime was being burnt, presumably mainly for local agricultural use. Two smithies, Mount Pleasant smithy (PRN 103387) and Rhes-y-cae village smithy (PRN 103404) have been recorded, and these would probably have served the local agricultural population in addition to the mining community. Penllyn cottage, Moel-y-crio (PRN 34766) is one of the cottages of the period which have perhaps been used as mining accommodation during their existence. A more notable residence which was built between 1824 and 1827 in the latter part of the period was Halkyn Castle (PRN 35149), this mansion was built by the Grosvenor family as an occasional residence, but mainly saw use as a sporting lodge. The associated park (PRN 22954) was apparently laid out in the 1820s with gardens, drives and woodland, and engulfed the old church (PRN 100345) and churchyard (PRN 19910) of St Mary's.
- 3.3.6 Modern utilisation of the area has changed little from that of the post-medieval period. The construction of new homes in the village of Halkyn, and the reclamation of some areas of former mining and processing, has altered the landscape to some extent, but the most notable

feature of the modern landscape is the increased size of the limestone quarries (eg Pant quarry, PRN 19211) which are present on Halkyn Mountain.

4 RECOMMENDATIONS AND MITIGATION

- 4.1 The sites revealed within the assessment area are depicted on Fig. 2 and described in the gazetteer of archaeological sites below (Appendix 1). A search of the SMR revealed that no sites had previously been recorded in the assessment area. In general, the sites discovered fall outside the area of screen bund construction and should therefore remain disturbed. However, Site Nos 1, 5, 9 & 10 are sufficiently close to the screen bund construction area to merit further recording prior to their potential loss; none of the sites is considered to be sufficiently important to merit preservation in-situ. The preferred method of recording would involve detailed total station survey of the extant remains of each site, to ensure preservation by record.
- 4.2 In view of the fact that the assessment area has undergone previous agricultural improvement, it seems likely that other archaeological features which have not been identified during the transect survey may be present. A watching brief during topsoil removal with sufficient time allowed for detailed recording of any features revealed should provide sufficient mitigation for any such sites that exist.
- 4.3 During the course of the assessment, a notable factor influencing the validity of the desk-top study was identified. The assessment area appears to have fallen entirely within the Grosvenor estate, and the lack of ready access to the Grosvenor (Halkyn) manuscripts, has inevitably led to a reliance on the Ordnance Survey and Tithe maps of the mid to late 19th century. It is possible that evidence of further, potentially earlier, sites may be present in the Grosvenor manuscripts; an attempt should be made to access these sources if at all possible.
- 4.4 The sites which have been identified during the transect survey were located in relation to nearby features during the walkover survey assisted by sketch plotting of aerial photography. The evidence of recent agricultural improvements within the quarry landholding revealed by the walkover survey (see Site Nos 8, 40, 41 etc.), suggests that identified archaeological features may be potentially under threat from such activities. In terms of future management of the assessment area, it would be preferable for a detailed total station survey of all the identified archaeological features within the Pant Quarry landholding to be carried out by suitably experienced archaeologists. This would enable archaeological sites to be accurately located should further investigation prove necessary; it is likely that the total station survey would be considered to be sufficient mitigation in view of the relatively minor importance of the identified archaeological sites.

5 SOURCES

5.1 References

- Burt, R., Waite, P., & Burnley, R., 1992. *The Mines of Flintshire and Denbighshire*. Exeter: University of Exeter Press.
- Davies, D.C., 1883. The metalliferous deposits of Flintshire and Denbighshire, *Y Cymmrodor*, 6, 1-52.
- Davies, E., 1949. *Prehistoric and Roman Remains of Flintshire*.
- Davies, O., 1935. *Roman Mines in Europe*. Oxford: Clarendon Press.
- Ebbs, C. 1993. *The Milwr Tunnel*. Llanferres.
- Francis, J.L., & Allan, J.C., 1931-2. Driving a Mines Drainage Tunnel in North Wales, *Transactions of the Institute of Mining and Metallurgy* 41. Institute of Mining and Metallurgy. London.
- Frost, P., 1993. *Clwyd Metal Mines Survey*, CPAT Report No. 88. Welshpool.
- Hains, B.A., & Campbell, S.D.G., 1988. *Deeside (North Wales) Thematic Geological Mapping*. Technical Report WA/88/2, Onshore Geology Series. Keyworth: British Geological Survey.
- Hodson, Y., 1989. *Ordnance Survey Drawings 1789 - c.1840*. Research Publications (NLW Collection).
- Lewis, W.J., 1967. *Lead Mining in Wales*. Cardiff: University of Wales Press.
- O'Leary, T.J., Blockley, K., & Musson, C., 1989. *Pentre Farm, Flint 1976-81: An official building in the Roman lead mining district*. BAR Series 207. Oxford.
- Pennant, T., 1784. *Tours in Wales*. Rhys, Caernarvon.
- Richardson, J.B., 1936. *A Revival of Lead Mining at Halkyn, North Wales*. London: Institute of Mining and Metallurgy.
- Rudeforth, C.C., Hartnup, R., Lea, J.W., Thompson, T.R.E., and Wright, P.C., 1984. *Soils and their Use in Wales*, Bulletin No 11. Harpenden: Soil Survey of England and Wales.
- Smith, B., 1921. *Lead and Zinc Ores in the Carboniferous Rocks of North Wales*, Memoirs of the Geological Survey 19, 38-41. Sheffield: HMSO.
- Smith, B., & George, T. N., 1935. *British Regional Geology, North Wales*. London: HMSO.
- Webster, G., 1952-3. The lead mining industry in North Wales in Roman Times, *Journal of the Flintshire Historical Society*, 13, 5-34.
- Williams, C.J., 1980. *Metal Mines of North Wales*. Rhuddlan: Chater Publications.
- Williams, C.J., 1980. The Lead Miners of Flintshire and Denbighshire, *Llafur* 3, 2, 87-96.

5.2 Documentary Sources

Accessed

1723 article of agreement of 21 year lease of lands in Halkyn. (CROH D/HE/213)

1733 agreement re: payment of shares for maintenance of a fire engine at Pentre and Maeslygan mines (CROH D/HE/227)

1735 Lease of mines in Halkyn. (CROH D/HE/228)

Not accessed

Grosvenor (Halkyn) Manuscripts in Flintshire Record Office, Hawarden (CROH)

D/GR/106 Lease of lead mines dated 25/9/1730.

D/GR/144 Lease of lead mines dated 7/11/1864.

D/GR/150 Lease of lead mines dated 1/12/1897.

D/GR/151 Lease of lead mines dated 20/4/1901.

D/GR/290 Lease of limestone at Pant Quarry dated 19/9/1904.

D/GR/291 Lease of limestone at Pant Quarry dated 5/2/1907.

D/GR/292 Lease of quarries of sand & gravel (at Moelycrio) dated 21/1/1908.

D/GR/659 Correspondence & papers concerning the Central Halkyn Mining Co. in Moelycrio area (1901-10).

D/GR/1780 sketches of mines at Moel y Gaer, Moelycria, & Silver Rake (Halkyn) (Early 18th century).

National Library of Wales (NLW)

NLW Minor 1425B. Document relating to New North Halkyn Lead Mines.

NLW J.R.Hughes Deposit. Vol.1, p.8, doc.33. Volume of papers re. Halkyn District Mines Drainage Act, 1913

5.3 Cartographic Sources

Accessed

1834-5 Ordnance Surveyors 2" drawings (uncopiable).

1839 Halkyn Tithe Map and Apportionment (NLW A/C 993)

1875 Ordnance Survey 1st edition 1:2,500 map, Flintshire Sheet 9.6

1877 Ordnance Survey 1st edition 1:2,500 map, Flintshire Sheet 9.10

1900 Ordnance Survey 2nd edition 1:10,560 Flintshire Sheet 9 SW

1912 Ordnance Survey 3rd edition 1:2,500 map, Flintshire Sheet 9.6

1912 Ordnance Survey 3rd edition 1:2,500 map, Flintshire Sheet 9.10

1964 Ordnance Survey 1:2,500 map, Flintshire Sheet SJ1969/2069

1964 Ordnance Survey 1:2,500 map, Flintshire Sheet SJ1970/2070

1974 Geological Survey of Great Britain. 1:50,000

Not Accessed

Grosvenor (Halkyn) Maps in Flintshire Record Office, Hawarden (CROH)

1738 D/GR/1679 Map of Halkyn Mountain (copied in 1864 from an original map of 1738)

c.1750 D/GR/1681 Map of Halkin Mountain.

1796 D/GR/1685 Map of Halkin Hall demesne and several other farms in Halkin and Northop.

1799 D/GR/1688 Plan of Halkin Mountain.

1804 D/GR/1694 Plan of encroachments on the waste lands in the parishes of Halkin and Northop.

c.1820 D/GR/1718 Plan of ground in the parishes of Halkin.....leased to the Halkin Mine Co....

c.1838 D/GR/1710 Sketch plan ofand part of Halkyn mountain.

1846 D/GR/1714 Rough draft of an estate in the parishes of Halkin.....

Mid 19th Century D/GR/1725 Halkyn and Northop common.

1861 D/GR/1734 Copy plan of Halkyn mountain.....

1861 D/GR/1735 Plan of lands in& Halkyn.....

1862 D/GR/1736-7 Plan of land on Halkyn mountain.....

1868 D/GR/1816 Plan & Section on the Panty Go vein, Deep Level, & Halkyn mines.

c.1875 D/GR/1819-23 Halkyn mines drainage plans.

c.1900 D/GR/1858 Plan showing Halkyn drainage tunnels & mines located therein.

5.4 Aerial Photographic Sources

Oblique

RCAHMW 935137 - 41

Vertical

Geonex 107 92 143 taken for Countryside Council for Wales at 1:10,000 on 6/7/1992.

Geonex 107 92 241-3 taken for Countryside Council for Wales at 1:10,000 on 6/7/1992.

Ordnance Survey 88/169/019 taken at 1:8,400 on 14/06/1988.

RAF 541/119/4071-3 taken at 1:10,000 on 30/07/1948.

RAF CPE/UK/1996/1204-6 taken at 1:10,000 in 1947.

Appendix 1: Pant Quarry Sites

1 SJ1954870270 Bryn Siriol Reservoir
Square shaped reservoir measuring 17m x 17m internally x c.1.5m deep. Cut into ground level, with slight external bank, 2m wide x 0.3m high present on NE, SE, & SW sides. NW side defined by spoil resulting from excavation of reservoir. Area of spoil measures 15m NW/SE (max) x 37m NE/SW x 1.2m high. The spoil has been cut by a modern track leading to the N corner of the interior. Corrugated iron clad shed present in interior. At W corner of interior a gully approx 0.5m above the internal level heads in a NW direction towards the nearby shaft (Site No 2). The gully is cut into the SW end of the spoil and measures 1.2m wide x 0.3m deep x 10m long; it may have been disturbed to the NW or the water could have been carried by a launder. Presumably the reservoir acted as a store for water from, or intended for use in relation to, the shaft (Site No 2).

2 SJ1945870315 Bryn Siriol Shaft I
Shaft, now collapsed and partially filled with household and agricultural waste, located to S of Bryn Siriol house. Shaft collapse zone measures c.10m diameter and is located between two large spoil tips. A wall (Site No 3) to the N of the shaft extends for approx 16m. From the W spoil mound a line of 4 hollow iron rods extends towards the wall with two rods in-situ in the wall. Several iron rails lying loose. Local resident (related to owner of Bryn Siriol) commented that the W spoil mound contained a gypsy caravan (apparently containing old motorbikes !) which had been buried to provide an air raid shelter during World War II.
Depicted on third edition (1912) Ordnance Survey map.

3 SJ1945670321 Bryn Siriol Sheepfold
Site of sheepfold depicted on the third edition (1912) Ordnance Survey 1:2,500 map. Visible remains composed of drystone wall revetted into the adjacent spoil mound of a shaft (Site No 2). Wall measures 16m long (E/W) x c.1m wide x c.1.3m high. W end of wall curves to N where it is faced on the W side. The wall defines the Bryn Siriol boundary, consequently the majority of the site lies outside the assessment area.

4 SJ1948770327 Bryn Siriol Shaft II
Slightly irregular sub-circular mound 10m in diameter x 0.4m high with approximately central hollow. Situated to SE of fence around Bryn Siriol. Probably represents a shaft with surrounding spoil mound.

5 SJ1958770320 Bryn Siriol Shaft III
Former shaft bisected by fencing located to E of Bryn Siriol. Section within assessment area backfilled. Part of an area of shafts and spoil mounds located immediately outside the assessment area. Overall diameter is 11m, central collapse area is 7m in diameter x c.1m deep.

6 SJ1942270304 Bryn Siriol Shaft IV
Circular hollow 3m diameter x 0.5m deep with low, crescent shaped, spoil mound partially surrounding to N. Overall diameter is 8m. Few stones present in spoil mound.

7 SJ1935270286 Bryn Siriol Shaft V
Possible shaft present in large, partially levelled, spoil mound, measuring 30m E/W x 30m N/S x 2m high (max). Slight depression towards W part of mound may be the shaft. Shaft may form an alignment with other shafts (Site Nos 2 & 6). Depicted on first edition (1875) and third edition (1912) Ordnance Survey maps.

8 SJ1935770252 Bryn Siriol Shaft VI
Central of a curving line of perhaps 3 shafts (including Site Nos 40 & 41) situated to S of possible shaft and spoil mound (Site No 7). This area of shafts has been backfilled and levelled fairly recently. Sketch plotted from 1993 RCAHMW aerial photograph (935137-41).

- 9 SJ1951970097 Pant Quarry Shaft I
North-easternmost of two adjacent shafts. Consists of rubble-choked hollow 2.5m in diameter with crescent shaped spoil mound partially surrounding on NE side. Overall the spoil mound measures 8m in diameter x 0.4m high.
- 10 SJ1951770091 Pant Quarry Shaft II
South-westernmost of two adjacent shafts. Consists of boulder-filled hollow 4m in diameter with surrounding circular spoil mound measuring 10m in diameter x 1.5m high.
- 11 SJ1948970091 Pant Quarry Shaft III
Shallow depression, 4m in diameter, probably indicative of a backfilled shaft.
- 12 SJ1944170116 Pant Quarry Shaft IV
Northernmost of group of four adjacent shafts. Consists of hollow 5m in diameter with surrounding spoil mound 10m in diameter.
- 13 SJ1944270152 Pant Quarry Shaft VIII
Easternmost of group of four adjacent shafts. Consists of hollow with crescent shaped mound of spoil surrounding on NE side. 5m in diameter x 1m deep.
- 14 SJ1937570125 Pant Quarry Shaft XII
Shaft located within area of ridge and furrow cultivation (Site No 15). Central hollow 3.5m diameter x 0.6m deep with surrounding ring of spoil 6m in diameter x 0.3m high. Choked with boulders.
- 15 SJ1940070140 Pant Quarry Ridge and Furrow
Area of ridge and furrow cultivation measuring 60m NW/SE x 70m, overall. Ridges aligned NW/SE and measure 3.5m to 6m wide x 0.3m high max. Appears to terminate at a low limestone scarp on its E side.
- 16 SJ1930069940 Bryn Hyfryd Ridge and Furrow
Former area of ridge and furrow cultivation aligned approximately NE/SW visible on RCAHMW aerial photograph 935137-41. Little surviving on the ground apart from occasional evidence of ridges, perhaps 4m wide x 0.1m high.
- 17 SJ1935069964 Bryn Hyfryd Shaft I
Shaft defined by hollow 8m in diameter x 0.7m deep located to the SE of rock outcrop.
- 18 SJ1934169968 Bryn Hyfryd Quarry I
Opencut limestone quarry measuring 8m N/S x 2m x 0.5m deep. Cut into low limestone scarp.
- 19 SJ1934769974 Bryn Hyfryd Quarry II
Opencut limestone quarry measuring 4m E/W x 1.5m x 0.5m deep. Cut into low limestone scarp.
- 20 SJ1929869983 Bryn Hyfryd Shaft II
Shaft defined by hollow with surrounding spoil mound, 8m in diameter x 0.7m deep. Located to W of rock outcrop.
- 21 SJ1931069985 Bryn Hyfryd Quarry III
Limestone quarry measuring approx 10m in diameter x 1.5m deep. Situated on rock scarp to S of group of similar quarries.
- 22 SJ1929069996 Bryn Hyfryd Shaft III
Shaft defined by hollow with intermittent spoil mound surrounding. 10m in diameter overall, hollow 3m diameter x 1m deep.

- 23 SJ1930070000 Bryn Hyfryd Quarry IV
Group of at least two small (max 8m diameter) limestone quarries on rock outcrop. Possible that much of the surface of the outcrop has been quarried.
- 24 SJ1927270011 Bryn Hyfryd Shaft IV
Shaft defined by hollow 2m in diameter x 0.4m deep, with spoil mound surrounding measuring 6m in diameter, overall.
- 25 SJ1927370018 Bryn Hyfryd Shaft V
Shaft defined by hollow 5m in diameter x 1.5m deep, with spoil mound surrounding measuring 10m in diameter, overall.
- 26 SJ1927070030 Bryn Hyfryd Quarry V
Limestone quarry measuring 30m N/S x 8m E/W x perhaps 3m deep, cut into N facing slope. Appears to have commenced from N side; surface indications suggest that it may have cut into a shaft at its S end.
- 27 SJ1926370057 Bryn Hyfryd Shaft VI
Large shaft defined by fenced hollow 12m in diameter x perhaps 2m deep, with spoil mound surrounding measuring 30m in diameter, overall. Hollow partially full of water. Spoil extends further to N. Depicted as shaft, and presumably in use on first edition (1875) Ordnance survey map, out of use by 1912 when 3rd edition Ordnance Survey map was produced.
- 28 SJ1928870069 Bryn Hyfryd Shaft VII
Shaft defined by hollow 3m in diameter x 0.7m deep.
- 29 SJ1928870052 Bryn Hyfryd Shaft VIII
Shaft defined by hollow 3m in diameter x 0.5m deep, with crescent shaped spoil mound surrounding on N side measuring 10m diameter x 1.2m high max.
- 30 SJ1927970055 Bryn Hyfryd Shaft IX
Shaft defined by hollow 2.5m in diameter x 0.5m deep, with slight spoil mound on N side.
- 31 SJ1928070047 Bryn Hyfryd Shaft X
Shaft defined by hollow 3m in diameter x 0.5m deep.
- 32 SJ1944570119 Pant Quarry Shaft V
North-easternmost of group of four adjacent shafts. Consists of hollow with crescent shaped mound of spoil on E side. Possibly 10m in diameter, overall. Immediately to E of Site No 12.
- 33 SJ1944270110 Pant Quarry Shaft VI
Westernmost of group of four adjacent shafts. Consists of hollow, 3m in diameter, apparently cut into rock, with crescent shaped mound of spoil on N side 8m in diameter, overall. Small tree growing in shaft which is choked with boulders.
- 34 SJ1945670112 Pant Quarry Shaft VII
Easternmost of group of four adjacent shafts. Consists of hollow, 4m diameter x 0.7m deep, surrounded by a ring of spoil 6m in diameter, overall.
- 35 SJ1944070147 Pant Quarry Shaft IX
Southernmost of group of four adjacent shafts. Consists of circular hollow 3m in diameter x 0.3m deep.
- 36 SJ1943670152 Pant Quarry Shaft X
Westernmost of group of four adjacent shafts. Consists of hollow with crescent shaped mound of spoil surrounding on N side. 3m in diameter x 0.7m deep.

- 37 SJ1943270165 Pant Quarry Shaft XI
Northernmost of group of four adjacent shafts. Consists of hollow 4m in diameter x 0.3m deep.
- 38 SJ1940370239 Bryn Siriol Shaft IX
Former shaft, now apparently backfilled, visible on 1993 RCAHMW aerial photograph (935137-41). Not visible on the ground.
- 39 SJ1939370234 Bryn Siriol Shaft X
Former shaft, now apparently backfilled, visible on 1993 RCAHMW aerial photograph (935137-41). Not visible on the ground.
- 40 SJ1935470241 Bryn Siriol Shaft VII
Southernmost of a curving line of perhaps 3 shafts (including Site Nos 8 & 41) situated to S of possible shaft and spoil mound (Site No 7). This area of shafts has been backfilled and levelled fairly recently. Sketch plotted from 1993 RCAHMW aerial photograph (935137-41).
- 41 SJ1935970265 Bryn Siriol Shaft VIII
Northernmost of a curving line of perhaps 3 shafts (including Site Nos 8 & 40) situated to S of possible shaft and spoil mound (Site No 7). This area of shafts has been backfilled and levelled fairly recently. Sketch plotted from 1993 RCAHMW aerial photograph (935137-41).
- 42 SJ1921270306 Bryn Siriol Shaft XI
Former shaft, now apparently backfilled, visible on 1993 RCAHMW aerial photograph (935137-41). Not visible on the ground.
- 43 SJ1929270318 Bryn Siriol Shaft XII
Former shaft, now apparently backfilled, visible on 1993 RCAHMW aerial photograph (935137-41). Not visible on the ground.
- 44 SJ1939170315 Bryn Siriol Shaft XIII
Former shaft, now apparently backfilled, visible on 1993 RCAHMW aerial photograph (935137-41). Not visible on the ground.
- 45 SJ1943470337 Bryn Siriol Shaft XIV
Former shaft, now apparently backfilled, visible on 1993 RCAHMW aerial photograph (935137-41). Not visible on the ground.
- 46 SJ1941770079 Pant Quarry Shaft XIII
Rock-cut shaft 1m in diameter x 1m deep, with surrounding spoil mound 10m in diameter. Base apparently filled with soil.
- 47 SJ1947570340 Bryn Siriol Find
Silver coin apparently found in vicinity of Bryn Siriol by relative of owner. Said to have been examined by a specialist who described it as being minted in Canterbury during the 12th century.

APPENDIX 2: GAZETTEER OF SITES WITHIN IMMEDIATE AREA
(source Regional SMR)

PRN	NGR	Name	Site Type	Period
13097	SJ20476904	Halkyn Mountain, caving event	Survey	Modern
13098	SJ21316917	Great Halkyn Lode, water pump I	Pump	Modern
13099	SJ21366914	Great Halkyn Lode, water pump II	Pump	Modern
13100	SJ210692	Great Halkyn Lode, winch	Winch	Modern
13101	SJ20896919	Great Halkyn Lode, ore-wagons	Wagon	Modern
16472	SJ20977103	Halkyn Old Church	Church	Post Medieval
16791	SJ20937105	Halkyn Church	Church	Multiperiod
16996	SJ20937105	Halkyn Church (St Mary), yard	Churchyard	Not recorded
17154	SJ209711	Halkyn National School	School	Modern
17478	SJ21167121	Pentre Halkyn Hafod farm	Moated site	Medieval ?
17835	SJ20307070	Pen-y-bryn shaft	Mine	Post Medieval
17877	SJ20697125	Old Hall, Halkyn (Roman road)	Road	Roman
18015	SJ20307070	Halkyn District United Mines	Mine (lead)	Modern
18039	SJ18957150	Cheney Rake	Mine (Lead/Silver)	Post Medieval
18041	SJ19607150	Chwarel Las	Mine (Lead/Silver)	Modern
18059	SJ20407150	Dingle	Mine (lead)	Post Medieval
18060	SJ19407140	Dog Pit	Mine (Lead/Silver)	Modern
18071	SJ20407170	Fron	Mine (Lead/Silver)	Modern
18073	SJ20807010	Pantygo	Mine (Lead/Silver)	Post Medieval
18086	SJ18607150	Grosvenor	Mine (Lead/Silver)	Post Medieval
18091	SJ21006980	Halkyn	Mine (Lead/Silver/Zinc)	Modern
18092	SJ20857010	Halkyn, Deep Level/Halkyn, Pantygo/Halkyn, Pantyffrith	Mine (Lead/Silver/Zinc)	Post Medieval
18093	SJ21306930	Halkyn, East	Mine (Lead/Silver)	Modern
18102	SJ18706910	Hersedd	Mine (lead)	Modern
18113	SJ18807110	Long Rake	Mine (Lead/Silver)	Post Medieval
18130	SJ19806980	Moel-y-Crio	Mine (lead)	Modern
18146	SJ20407060	Old Rake	Mine (Lead/Silver)	Post Medieval
18152	SJ20506960	Pantyffrith	Mine (Lead/Silver)	Post Medieval
18153	SJ20457145	Pantygo North/Pantygo West/Brynparade/Collossus	Mine (Lead/Silver/Zinc)	Post Medieval
18187	SJ19807080	Pwllgwenllan	Mine (Lead/Silver)	Modern

18188	SJ18407150	Pwllmelyn	Mine (Lead/Silver)	Modern
18191	SJ18606930	Rhewl	Mine (Lead/Silver)	Modern
18204	SJ19207010	Tan-y-Foel	Mine (lead)	Modern
18207	SJ18106940	Trellynia	Mine (lead)	Modern
18218	SJ19307120	Union	Mine (lead)	Post Medieval
18223	SJ19707100	Wagstaff	Mine (Lead/Silver)	Modern
18251	SJ19907140	Union, Mary Jane Shaft	Mine (lead)	Post Medieval
18262	SJ2170	Brynmain	Mine (lead)	Modern
18265	SJ2170	Comebine	Mine (Lead/Silver)	Modern
18266	SJ2170	Dafern Dywyll	Mine (lead)	Modern
18268	SJ2170	Dreamland	Mine (lead)	Modern
18269	SJ2170	Ebury	Mine (Lead/Silver)	Modern
18270	SJ2170	Gordon	Mine (lead)	Modern
19095	SJ21146903	Northop Find	Find	Prehistoric
19211	SJ198702	Pant quarry	Quarry	Modern
19414	SJ209709	Halkyn Castle	House	Modern
19909	SJ20937105	Halkyn Church (St Mary)	Church	Not recorded
19910	SJ20977103	Halkyn Old Church Yard	Churchyard	Post Medieval
19938	SJ209708	Halkyn	Settlement	Multiperiod
22954	SJ209709	Halkyn Castle, garden	Garden	Modern
23368	SJ19956915	Plas Winter Mine Chimney	Chimney	Post Medieval
23370	SJ19306923	Bryngwiog Mine Buildings	Mine building	Modern
25013	SJ19886931	Plas Winter farmhouse	House	Unknown
31305	SJ187710	Rhes-y-Cae, Beehive Pigsty at Peacock Farm	Pigsty	Not recorded
34734	SJ206702	Halkyn Mountain watching brief 1995 site 1, shaft 2	Watching brief	Modern
34735	SJ206701	Halkyn Mountain watching brief 1995 site 1	Watching brief	Modern
34736	SJ209702	Halkyn Mountain watching brief 1995, site 2	Watching brief	Modern
34737	SJ212701	Halkyn Mountain watching brief 1995, site 3	Watching brief	Modern
34738	SJ202702	Halkyn Mountain watching brief 1995, site 3, shaft S6	Watching brief	Modern
34739	SJ212699	Halkyn Mountain watching brief 1995, site 4	Watching brief	Modern
34740	SJ213698	Halkyn Mountain watching brief 1995, site 4, shaft S2	Watching brief	Modern
34741	SJ213694	Halkyn Mountain watching brief 1995, site 5	Watching brief	Modern
34742	SJ214694	Halkyn Mountain watching brief 1995, site 6	Watching brief	Modern

34766	SJ19316981	Moel-y-Crio, Penllyn Cottage	House	Post Medieval
35149	SJ209708	Halkyn castle and attached stable block	House	Post Medieval
100229	SJ17936969	Rhoft Wood standing stones	Stone setting	Prehistoric
100230	SJ19676959	Hen Efail round barrow	Round barrow	Bronze Age
100240	SJ19986960	Plas Winter finds	Find	Bronze Age
100277	SJ18057042	Mwewd Mound	Non antiquity	Unknown
100278	SJ19317134	Long Rake hoard	Hoard (bronze)	Iron Age
100286	SJ181705	Grecasand Caer Llyn placename	Placename	Post Medieval
100292	SJ21116903	Moel y Gaer hillfort Rhosesmore (multiple)	Multiple site	Multiperiod
100293	SJ21116903	Moel y Gaer Rhosesmor Neolithic find	Find	Neolithic
100294	SJ21116903	Moel y Gaer Rhosesmor Mound	Round barrow	Bronze Age
100295	SJ21116903	Moel y Gaer Rhosesmor palisaded enclosure	Enclosure	Iron Age
100296	SJ21116903	Moel y Gaer hillfort Rhosesmor (Iron Age)	Hillfort	Iron Age
100297	SJ21116903	Moel y Gaer Rhosesmor beacon	Beacon	Post Medieval
100303	SJ21516893	Plas-yn-rhos farm house	House	Post Medieval
100316	SJ21326959	Pen y parc mound ii	Non antiquity	Not recorded
100344	SJ20977103	Ffynnon Fair	Well	Medieval ?
100345	SJ20977103	Halkyn Old Church	Church	Post Medieval
101607	SJ19727027	Carnedd Garneddwen	Barrow ?	Bronze Age ?
101758	SJ19006990	Moel Ffagnallt hillfort	Hillfort	Iron Age
102486	SJ20937105	Halkyn Church (St Mary), cross	Cross	Medieval
102487	SJ19936963	Moel y crio	Barrow ?	Bronze Age ?
102702	SJ183707	Garreg Llwyd fieldname	Standing stone ?	Prehistoric ?
102736	SJ18456995	Ffagnallt farmhouse	House	Post Medieval
102923	SJ1971	Halkyn Mountain lead mines	Mine (lead)	Post Medieval
102924	SJ1971	Halkyn Mountain quarries	Quarry	Post Medieval
103057	SJ21526984	Pen-y-parc limekiln	Kiln (lime)	Post Medieval
103080	SJ20907050	Halkyn, Hall	Mine (Lead/Silver)	Post Medieval
103375	SJ19206910	Bryngwiog/Nantygo	Mine (Lead/Silver/Zinc)	Post Medieval
103377	SJ21357145	Pen-len milestone	Milestone	Modern
103378	SJ20787103	Old Lodge field boundary marker	Boundary stone	Post Medieval
103381	SJ20087038	Pant Quarry limekiln	Kiln (lime)	Post Medieval

103382	SJ20607083	Bryn Rodyn limekiln i	Kiln (lime)	Post Medieval
103383	SJ20597086	Bryn Rodyn limekiln ii	Kiln (lime)	Post Medieval
103386	SJ19307080	Westminster, New/Long Rake East	Mine (Lead/Silver)	Modern
103387	SJ20587052	Mount Pleasant smithy	Smithy	Post Medieval
103388	SJ20307070	Halkyn, Central/Halkyn, New North	Mine (lead)	Post Medieval
103397	SJ18987107	Rhes-y-cae horse whimsey site	Horse whim	Post Medieval
103398	SJ19657090	Rhes-y-cae limekiln	Kiln (lime)	Post Medieval
103400	SJ18957105	Rhes-y-cae village engine house i	Engine house	Post Medieval
103401	SJ18807112	Rhes-y-cae village engine house ii	Engine house	Post Medieval
103402	SJ18267039	Cefn-y-gildia boundary marker	Boundary marker	Post Medieval
103404	SJ19037105	Rhes-y-cae village smithy	Smithy	Post Medieval
103405	SJ19107004	Black Lion limekiln	Kiln (lime)	Post Medieval
103409	SJ19116971	Llyn limekiln	Kiln (lime)	Post Medieval
103410	SJ19956903	Llety'r eos farm limekiln	Kiln (lime)	Post Medieval
103411	SJ19946899	Llety'r eos boundary marker	Boundary marker	Post Medieval
103416	SJ20506992	Pant-y-gof engine house	Engine house	Post Medieval
103417	SJ20066979	Central Halkyn Quarry limekiln	Kiln (lime)	Post Medieval
103419	SJ20106980	Halkyn, Mount/Halkyn, West	Mine (Lead/Silver)	Modern
103422	SJ18656970	Trellyniau Fawr limekiln	Kiln (lime)	Post Medieval
103423	SJ19716967	Stanley House limekiln	Kiln (lime)	Post Medieval
103425	SJ19956915	Plas Winter/Plasresgob	Mine (Lead/Silver)	Modern
103641	SJ18057110	Graig Filch brickworks	Brickworks	Post Medieval
103642	SJ17987155	Bryn y berthen limekiln	Kiln (lime)	Post Medieval
104061	SJ183703	Mwcdw boundary stone 1	Boundary stone	Post Medieval
104063	SJ182706	Coed y graig boundary stone	Boundary stone	Post Medieval
104064	SJ18267015	Ffagnallt limekiln	Kiln (lime)	Post Medieval

APPENDIX 3

PANT QUARRY, HALKYN, FLINTSHIRE: SPECIFICATION FOR AN ARCHAEOLOGICAL DESK-TOP ASSESSMENT BY CLWYD-POWYS ARCHAEOLOGICAL TRUST

1 Introduction

- 1.1 The proposed development of a block of land at Pant Quarry involves the extension of the existing quarry and the construction of new screens.
- 1.2 This area lies approximately 0.75km SW of Halkyn and the same distance to the SE of Rhes-y-Cae.
- 1.3 The Curatorial Section of the Clwyd-Powys Archaeological Trust in their capacity as archaeological curators for the county have advised that an Archaeological Desk-top assessment is necessary to assess the implications of the proposed development on the archaeological resource. Accordingly a brief has been prepared by ASH Consulting Group which describes the scheme of archaeological works required.

2 Objectives

- 2.1 The objectives of the evaluation are:
 - 2.1.1 to reveal by desk-based assessment and walk-over survey, the nature, condition, significance and, where possible, the chronology of the archaeology within the area of the proposed development in so far as these aims are possible;
 - 2.1.2 to prepare a report outlining the results of the assessment, to identify areas where desk-top assessment alone cannot provide sufficient information and make recommendations for further work or mitigatory measures;
 - 2.1.3 to incorporate sufficient information on the archaeological resource for a reasonable planning decision to be taken regarding the archaeological provision for the area affected by the proposed development;
 - 2.1.4 to identify and make broad recommendations for the management of the archaeological resource, including any further provision for that resource where it is considered necessary.

3 Methods

- 3.1 The assessment will be carried out according to the guidelines in the *IFA Standard and Guidance for Archaeological Desk-Based Studies* and will involve the examination of all the readily available primary and secondary records relating to this part of the town, including documentary and cartographic sources. Archives and repositories will include the County Record Offices at Hawarden, the National Monument Record held by the RCAHMW at Aberystwyth, The National Library of Wales, and the County Sites and Monuments Record. Borehole and test-pit data will be requested from the developers where appropriate.
- 3.2 The assessment will be supported by a field visit to determine the state of the identified archaeology and the presence of other sites not identified from the documentary sources and to make a photographic record of the area.
- 3.3 Following the on-site work an illustrated and bound report will be prepared according to the principles laid out in the Brief (page 3-4). This will be in A4 format and contain conventional sections on: Site location, Topography and Geology; Historic Background; Catalogue of sites identified with notes on their condition and significance, Conclusions and Recommendations and References, together with appropriate appendices on archives and finds.
- 3.5 The site archive will be prepared to specifications laid out in Appendix 3 in the *Management of Archaeological Projects* (English Heritage, 1991).

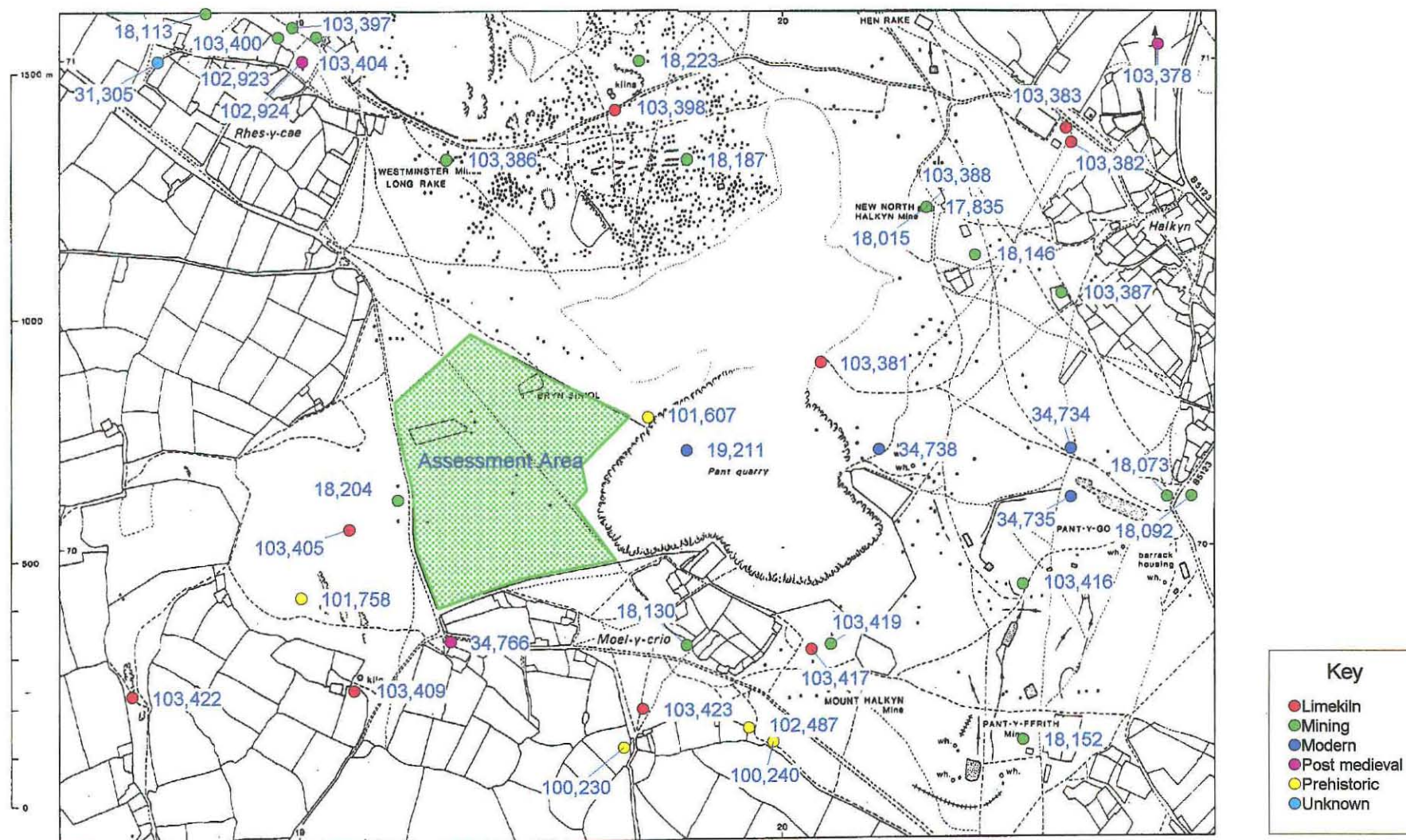
4 Resources and Programming

- 4.1 The assessment will be undertaken by a skilled and experienced archaeologist who will also be responsible for undertaking the desk-based assessment. Overall supervision will be by Dr A Gibson, a senior member of CPAT's staff who is also a member of the Institute of Field Archaeologists.
- 4.2 All report preparation will be completed by the same field archaeologist who conducted the assessment.
- 4.3 It is anticipated that the assessment and evaluation will take no more than five days in all and that the subsequent report would be prepared immediately thereafter, dependent on the client's instructions and the arrangement of a suitable timetable. The date of commencement, at the time of writing, has yet to be agreed with the client, and will be dependent on the state of the site and negotiated access. The archaeological curator will be informed of the detailed timetable and staffing levels when agreement has been reached with the client.

- 4.4 Requirements relating to Health and Safety regulations will be adhered to by CPAT and its staff.
- 4.5 CPAT is covered by appropriate Public and Employer's Liability insurance.

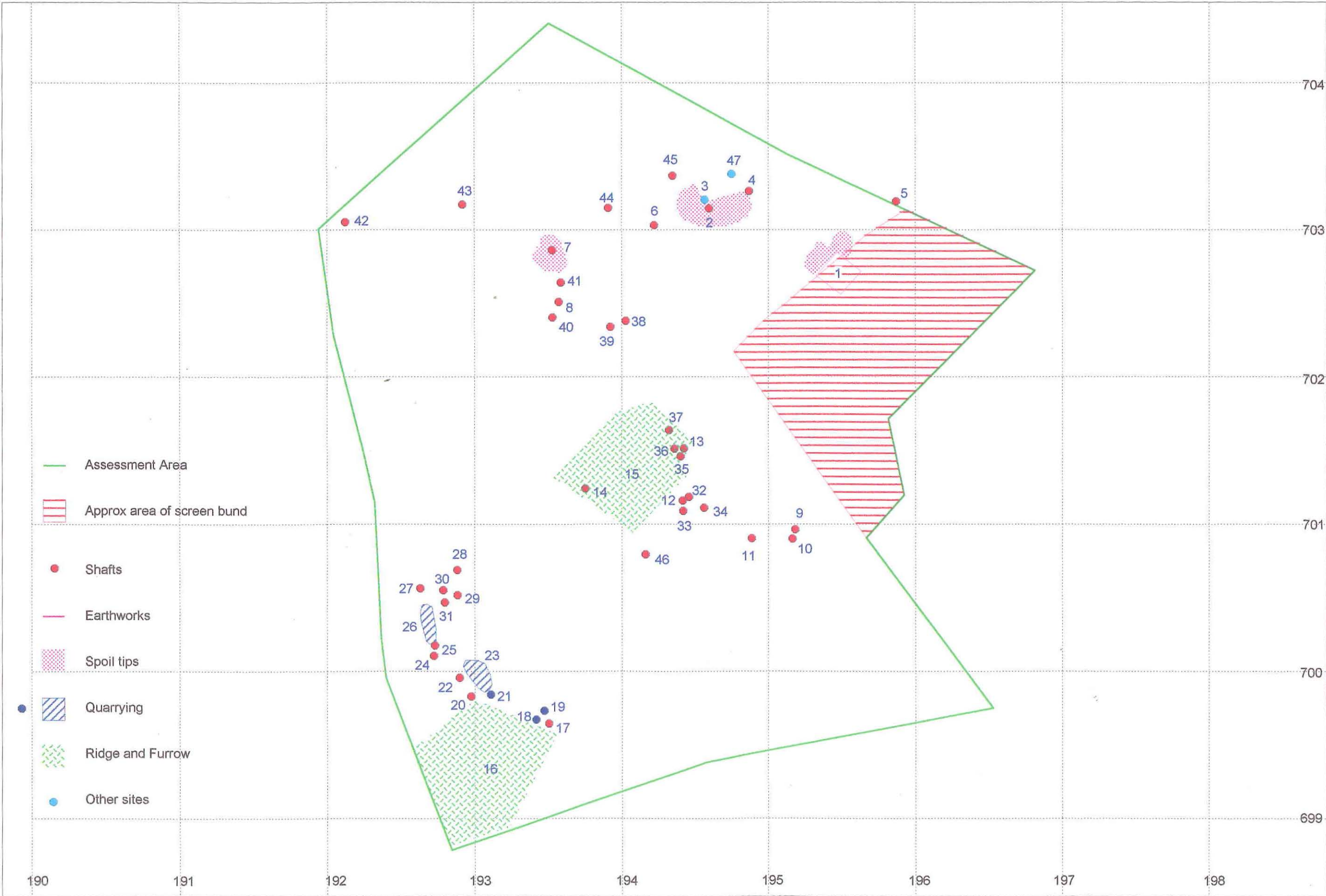
A.M. Gibson
Projects Manager

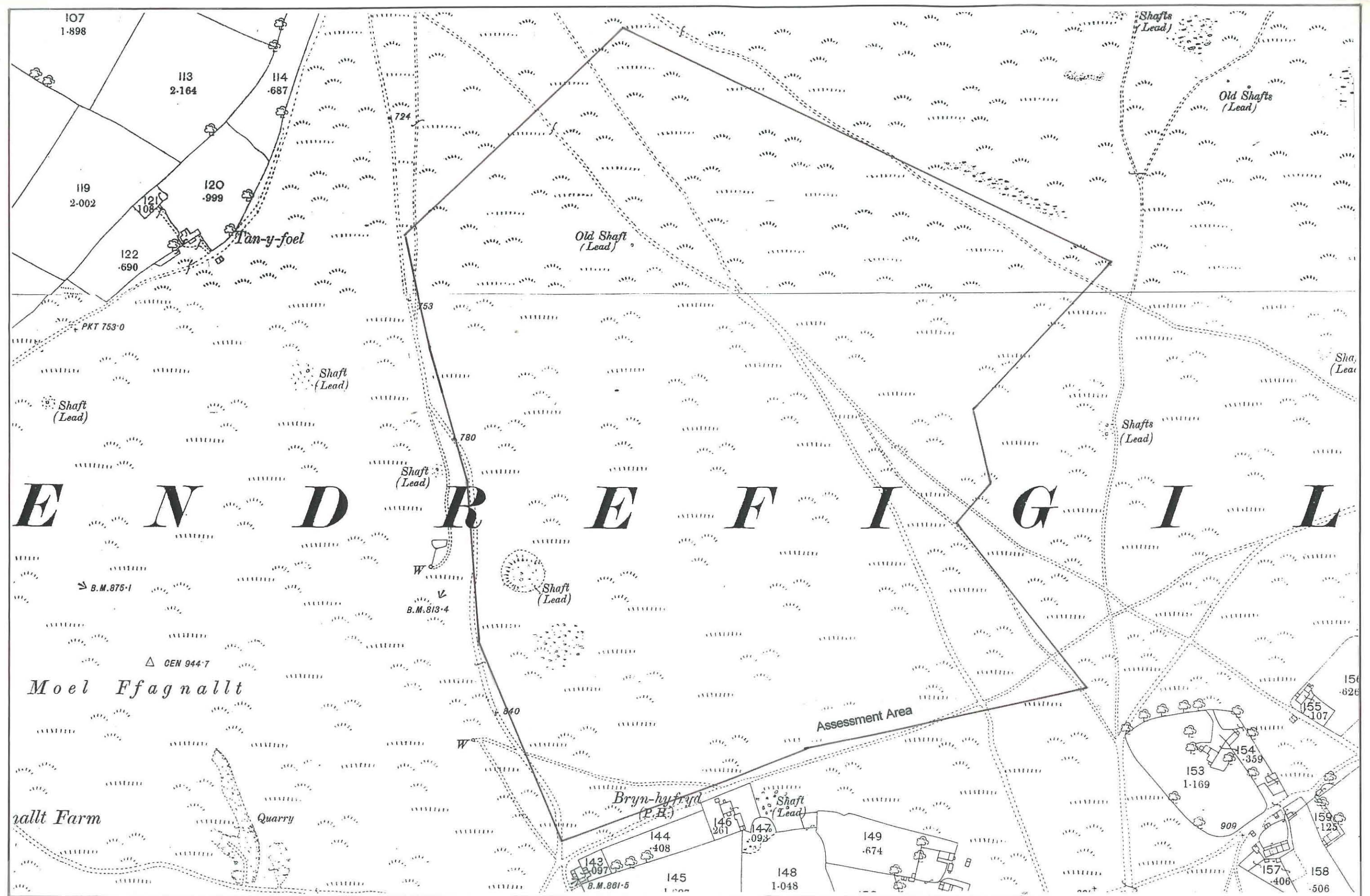
Fig. 1 Pant Quarry, Halkyn, Flintshire. Archaeological Sites within immediate area (source Regional SMR. See Appendix 2).
Scale 1:12,500



Copyrights applied for

Fig. 2 Archaeological Sites within Assessment Area (See Appendix 1). Site locations approx. Scale 1:2,500





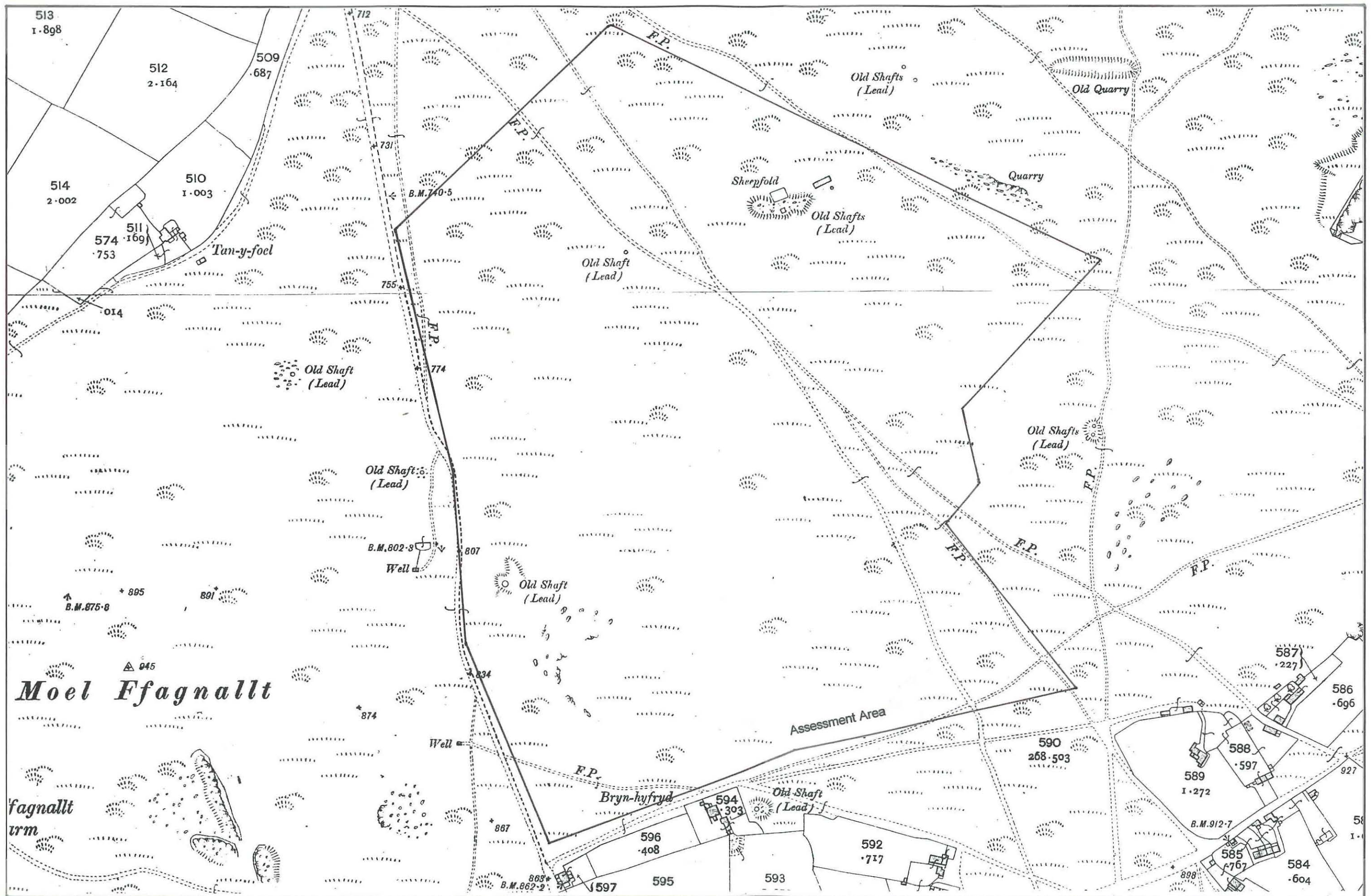




Plate 1. Site 1 from SSW. Photo CPAT 722.24



Plate 2. Site 1 gully at NW corner with Site 2 in background from SE. Photo CPAT 722.23



Plate 3. Site 7 from SW. Photo CPAT 722.19



Plate 4. Site 10 from SSW. Photo CPAT 722.26



Plate 5. Sites 25, 26 and 27 from S. Photo CPAT 722.25



Plate 6. Site 46 from SW. Photo CPAT 722.27