# THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

Moel Findeg, Denbighshire ARCHAEOLOGICAL ASSESSMENT



Report No 325

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> NW Jones July 1999 Report for Denbighshire County Council

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# **CPAT Report Record**

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## Internal memo

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1.1 The proposal to create a Local Nature Reserve on Moel Findeg (SJ206612), involves the drafting of a management plan for the area. Part of the this plan will be concerned with the historic environment and the archaeological resource, and in order to gain the necessary information a detailed archaeological survey was required to provide a better understanding of the archaeological resource and the historical development of the area concerned. Accordingly, a Brief (dated 21 May 1999) was prepared by Fiona Gale, Denbighshire Countryside Service, which described the scheme of archaeological works required.

# 2 LOCATION AND TOPOGRAPHY

- 2.1 The area of study is centred on SJ206612 (fig. 1) and extends over 0.22km<sup>2</sup>, forming the western part of Moel Findeg and lying to the east of the village of Maeshafn. The area falls entirely within Denbighshire, although the county boundary with Flintshire shares its eastern boundary. Minor roads edge the area to the north-west and south-east. Maeshafn Grosvenor Shaft (Primary Record Number or PRN derived from the SMR = 102803) lies immediately to the west, with the main site being outside the study area, although associated features are now known to extend into the area of study.
- 2.2 Topographically, the area rises from 300m OD along the western boundary to around 360m OD at the highest point on Moel Findeg, to the north-east. The vegetation is varied, consisting of immature, mostly birch woodland on the lower ground to the west, with heather, bracken and sparse woodland covering most of the remaining area.
- 2.3 The underlying bedrocks are millstone grits and sandstones of the carboniferous series, with significant lead veins which have been exploited in the past.

# 3 HISTORICAL BACKGROUND

- 3.1 The following section has been derived from a desk-based study which was undertaken using all readily available primary and secondary documentary, cartographic and aerial photographic sources within the following repositories: County Sites and Monuments Record (SMR), Clwyd-Powys Archaeological Trust, Welshpool; Denbighshire Countryside Service; County Records Offices (CRO) atHawarden and Ruthin; National Library of Wales, Aberystwyth; National Monuments Record (NMR), Royal Commission on Ancient and Historical Monuments in Wales (RCAHMW), Aberystwyth. All features identified during the study are shown on fig. 2.
- 3.2 A number of documents held at CRO Hawarden were within the Grosvenor Collection, which has restricted access. Consequently, these documents were not examined as part of the study, although they are listed under References. The SMR currently holds no record of any sites within the study area, although the description for Maeshafn Grosvenor Shaft (PRN 102803) indicates that associated features extend within the area, but were not individually identified in the record.

# General background

- 3.3 The earliest references to the area relates to lead mining at Maes-y-safn during the 17th century, when Sir Henry Archbold and John Myddleton were in partnership (Lewis 1967, 62). There is, however, no detail of what mining activities were being undertaken, or their precise location.
- 3.4 The Enclosure Award for Llanferres (CROH D/GR/1268), dated 1793 and the accompanying map of 1799, shows the area to be unenclosed at this time, and gives no detail of any boundaries or other features within the area.
- 3.5 The Ordnance Survey Surveyors' drawing (No. 341) of 1834-5 revealed no significant information regarding the area, which is shown as rough ground. Mining features are depicted in the surrounding area, but not within the study area.

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- 3.6 The Tithe Survey of 1838 (CROR TM/52/1; fig. 3) shows the area as unenclosed land belonging to Richard Garnons and occupied by Evan Davies, covering an area of 59 acres, 2 roods and 11 perches.
- 3.7 The Ordnance Survey 1st edition at 1:2,500 (Denbighshire 15.14 and 15.15; fig. 4), surveyed in 1870 and published in 1878 provides the earliest accurate cartographic evidence for the area and reveals a considerable amount of information relating mostly to Maeshafn lead mine. Within the study area the map shows three reservoirs to the east of the main (Grosvenor) shaft, together with a fourth to the south, lying within two bounded enclosures. These were presumably to supply water for the boiler of the Cornish engine house and are likely to have been supplied by a system of leats, not shown on the map, as well as by water pumped from the mine. Towards the south-east of the area a small pond or reservoir is shown alongside what may be a short length of boundary. Close to the eastern, county boundary, an old lead shaft is shown, with a well nearby. Elsewhere, a number of tracks are shown crossing the area, together with several field boundaries in the northern part of the area.
- 3.8 The Ordnance Survey 2nd edition 1:2,500 was unavailable, although the 1:10,560 series, revised in 1898 and published in 1900, was examined. The evidence for the study area would appear to be the same for both this and the 3rd edition Ordnance Survey 1:2,500 (fig. 5), revised in 1910 and published in 1914, with the exception that the 3rd edition shows the lead mine to be disused. Both maps no longer show several of the buildings associated with the mine, but outside the study area, which are depicted on the 1st edition. Within the study area, the reservoirs to the east of Grosvenor Shaft have disappeared, although that to the south still remains. Elsewhere, the disused shaft to the east of the area is shown as an earthwork mound, while a series of new field boundaries have been constructed in the northern part of the area, in part replacing those shown on earlier editions. A possible rectangular building is also shown along the northern side of a boundary dividing the northern area from an area of coniferous woodland to the south.
- 3.9 Evidence for individual shafts within the area is provided by the British Geological Survey (Campbell & Hains 1988, Map 4) which identifies five shafts. The location of the BGS mine workings is not always of the highest accuracy, but in this instance an attemp was made to verify the shafts during the subsequent field survey.
- 3.10 An examination of the vertical aerial photographic collections held by Denbighshire County Council and the NMR revealed limited evidence of archaeological features within the study area. The RAF 1:10,000 coverage of 1948 and 1954 shows mining remains around Maeshafn Grosvenor Shaft, together with two shafts which are visible on the upper part of Moel Findeg. In addition, there is some detail of the extent of the quarry workings, including a possible incline.

#### Maeshafn Grosvenor Shaft (PRN 102803)

- 3.11 The majority of information relating to the study area is associated with Maeshafn (or Maes-y-safn) lead mine. It appears that mining began in the general area during the 17th century (Lewis 1967, 62), and Maeshafn was certainly in production by the mid-18th century. During the 19th century the mine became the richest of the Grosvenor mineral properties.
- 3.12 The Maeshafn vein was worked from five main shafts, including the Grosvenor Shaft, drained by a water wheel and level issuing into the River Alyn (Earp 1958, 55). Two wheel pits (PRN 102915) survive at SJ19306140. A plan of 1879 includes nine shafts for Maeshafn, including one listed as No. 9 and referred to as East Maeshafn, which was filled in by this time and can be identified as an earthwork mound on the western slope of Moel Findeg. Power was provided at Grosvenor Shaft by the construction of a Cornish engine house with an 85" pumping engine in 1865. The Ordnance Survey 1st edition 1:2,500 shows a series of four reservoirs to the east and south of the engine house, which provided water for the boilers. Those to the east were destroyed during later silica extraction, but the remaining reservoir was subsequently used to supply water to Maeshafn village from 1906. Further exploration was carried out by Brunner Mond and Co. between 1896 and 1903, principally driving east below Moel Findeg to include the Cefn-hir, Lisburn, America, Jamaica and East Maeshafn mines. A shaft capping programme during 1978 led to the destruction of the engine house (Frost 1994).
- 3.13 Mining returns show details of production figures for Maeshafn between 1845 and 1906, when it was yielding lead, silver and some zinc. Employment figures show a dramatic increase in 1898 from between 4 and 8 men to 61 men, and 72 the following year. This corresponds to the purchase of Maeshafn by Brunner Mond and Co. in 1897, who operated the mine until its closure in 1907. Prior to this, ownership is recorded as: 1859-61 Lewis & Brother; 1862-73 John Taylor & Sons; 1877

Maesaffon Mine Co.; 1878 Maeshafn Mine Co.; 1879-81; Thompson Ollis and Williams; 1880-1881 Maeshafn Miners; 1882 Richard Jones; 1889-91 J.Vivian & E.Wheldon (Burt *et al.* 1992, 61-62, 138-139). On two occasions during the 1860s annual production was almost 10,000 tons. The shipment of ore was made easier by the opening of a branch to Minera of the Shrewsbury and Chester Railway in 1854, after which ore was transported to Llanelli for smelting (Lewis 1967, 219 and 305).

3.14 Following the closure of the mine, several leases were taken out during the early 20th century for the extraction of silica to be used in glass manufacture. Extraction continued during the 1930s and 40s, with quarrying destroying significant features relating to Maeshafn lead mine, such as a series of reservoirs (T. King pers comm.)

#### 4 FIELD SURVEY

- 4.1 The field survey was conducted by a two person team on 5 July 1999. The topography and dense vegetation limited the effectiveness of the survey over a large part of the area. Consequently, it was decided that a transect survey was not feasible and could not be undertaken until such time as the vegetation died down, probably in later winter or early spring. The survey was therefore limited to visiting all sites identified by the desk based study and recording these, together with any previously unrecorded sites which were encountered. In particular, the survey concentrated on the lower ground adjacent to Grosvenor Shaft, in an area of woodland containing the remains of mine reservoirs, leats and later quarrying. It would seem probable that revisiting the area under more favourable conditions would reveal further sites as well as enabling a better record to be made of those sites which are already known.
- 4.2 All sites identified during the desk-based study were examined and recorded, together with previously unrecorded sites identified during the field survey. Each site was recorded on individual Site Visit Forms, with a sketch plan being provided where appropriate. To facilitate description all sites were subsequently allocated Primary Record Numbers (PRNs) following consultation with the Regional SMR Officer, and were entered into a standard database format compatible with the SMR, but with only essential core data and a description being included. Copies of the visit forms have been provided to Denbighshire Countryside Service, with the original forms deposited with the Regional SMR.
- 4.3 Previously unrecorded sites identified during the field survey have been plotted as accurately as possible in relation to other know features. However, a caveat must be entered here for the location of this new data on fig. 2 is at best an estimate, and the plan should not be utilised to provide precise grid references.

#### Mining remains

- 4.4 Of the five shafts identified by the British Geological Survey (Campbell & Hains 1988, Map 4), only three were identified with any certainty. PRN 80200 in the north-east of the area was tentatively identified in an area of high bracken, close to a possible trackway (PRN 80243) running east-west. On the upper part of Moel Findeg, close to the eastern boundary, two shafts were identified in dense undergrowth. PRN 80201 survives as an earthwork mound *c*. 8m diameter and up to 1.2m high with a central depression in the summit. It was difficult to estimate the dimensions of PRN 80202 due to the vegetation, although the mound may be up to 12m in diameter and 1.7m high, also with a central depression in the summit. To the west of these two shafts the position of a well shown on early Ordnance Survey maps is indicated by a large patch of rhododendron, but with no structural evidence for the well visible. The two tracks also shown on the OS early editions were not identifiable due to the vegetation. Close to the southern boundary, the fourth shaft (PRN 80204) was not identified in dense undergrowth. The fifth shaft (PRN 80203) is perhaps the largest, surviving as a hollow *c*. 6m across on a moderate west facing slope, with a substantial spoil heap surrounding the downslope sides.
- 4.5 It was possible to identify with certainty three of the five reservoirs shown on the Ordnance Survey 1st edition. Towards the southern end of the area a small irregular reservoir or pond (PRN 80205) is shown along the northern side of a short length of boundary (PRN 80212). The site of the reservoir survives as a flat area c. 5 x 15m within an area of young saplings and undergrowth.
- 4.6 The largest reservoir (PRN 80206), which is now silted, lies in an areas of woodland close to the western boundary. The reservoir, which is *c*. 80m long and 20m wide, is formed by a substantial bank

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up to 4m wide and 2.5m high along the west side and south end, with a bank 2.5m wide and 1.2m high along the eastern side. Stonework is visible in the area of the outlet sluice at the north-west corner, with a short length of leat running from the reservoir to the boundary. A series of leats appear to have fed the reservoir, the primary leat (PRN 80240) feeding into the south-east corner. The leat survives as an earthwork channel up to 1.3m wide and 0.4m deep. On the eastern side a substantial leat (PRN 80213) contours the hillside from the south. The leat is visible on the western side of the road, possibly flowing from a reservoir shown on the Ordnance Survey 1st edition surveyed in 1870 (fig. 4) with a culvert beneath the road, from where it runs north as a ditch 1.9m wide and 0.5m deep. The leat can be traced as far as a later quarry (PRN 80234), although before this a leat (PRN 80242) leads from it downslope to reservoir PRN 80206 and is joined by a third leat (PRN 80233) from the north. A further leat (PRN 80241) is just visible as a slight earthwork running roughly parallel and upslope from PRN 80213.

4.7 A series of three reservoirs formerly served the boiler house at Grosvenor Shaft, lying immediately upslope to the east. The southernmost of these (PRN 80207) remains fairly well intact, measuring *c*. 34 x 12m. A stone revetment wall up to 1.2m high forms the western side and southern end, with a bank at the north end and the natural slope to the east. A sluice and leat survive near the north-west corner. To the north of this, the next reservoir (PRN 80208), which measures 45 x 18m, has been largely destroyed by a later quarry (PRN 80238). However, although much of the area of the reservoir has been lost, the banks defining its south, east and north sides survive, together with a possible sluice at the south-west corner. It was not possible to identify the northernmost reservoir (PRN 80209), which may have been infilled.

## Quarrying

- 4.8 The extraction of silica has had a considerable impact on the western part of the area. Four substantial quarries (PRNs 80234, 80235, 80237 and 80238) can be identified, together with two smaller quarries (PRNs 80228 and 80230) further to the south. All are visible in the RAF vertical aerial photographs of 1948 and 1954, which also show a possible incline (PRN 80236) running west from PRN 80235. This feature survives as a broad track following an even gradient, close to the base of which two timbers with fixing bolts were noted. A substantial stone revetted platform (PRN 80231) up to 12m long and 2m high lay immediately to the west of quarry PRN 80230 and may have been a loading area.
- 4.9 The ruins of a small stone building (PRN 80210) lie on the north side of boundary PRN 80217, to the north of the quarrying area. The remains measure c. 5.75 x 4.0m, with walls 0.8m thick and 0.4m high and an entrance to the west. It is possible that this may have been used as a magazine associated with quarrying.
- 4.10 A small scoop (PRN 80232) close to the western boundary may be small-scale quarrying, possibly for walling, as is a band of linear quarrying (PRN 80239) following an outcrop to the north-west of the area.

# Boundaries

- 4.10 A series of field boundaries area shown on early Ordnance Survey maps, only some of which were identified due to the dense vegetation. Towards the southern end of the area a boundary (PRN 80212) survives as an earthen bank c. 60m in length and up to 2.5m wide and 1.2m high. Within the woodland east of reservoir PRN 80206 a slight terrace may indicate the line of a former boundary (PRN 80214). To the north of the area of mining a stub wall forms the western end of PRN 80215, surviving elsewhere as a possible bank. Further east a bank (PRN 80217) runs east-north-east to the south of a footpath. Although a series of boundaries is shown further to the north, only one could be identified. PRN 80216 survives as a slight lynchet, although the line is probably represented by large hawthorns and coppiced rowans. Adjacent to this is an earthen mound (PRN 80243) measuring c. 8.5 x 5 x 1.5m.
- 4.11 Two enclosures are shown on the Ordnance Survey 3rd edition in the north-eastern part of the area. There was no visible trace of PRN 80226 in high bracken, although PRN 80225 could be identified, consisting of a derelict stone wall.

#### 5 CONCLUSIONS

- 5.1 The results from the desk-based study would appear to suggest that the area was unenclosed and essentially undeveloped at the time of the Enclosure Map of 1799 and the Tithe Survey of 1838.
- 5.2 Although lead mining within the general area is known from at least the 17th century, there is no direct evidence to suggest that this early activity extended within the study area. The main period of mining interest is associated with the development of the Maeshafn Mine, and in particular with developments around the Grosvenor Shaft. Although a precise date is not given for the Grosvenor Shaft, it may be assumed that development began during the mid-19th century and was well under way by 1865 when a Cornish engine house was constructed to pump the mine. Within the study area, this led to the construction of a series of reservoirs and associated leats. Five shafts have been identified within the area, all of which remain undated, although from their general appearance they may have been little more than trials along the veins.
- 5.3 Lead mining ceased at Maeshafn in 1906-7, after which the area was the subject of several leases for silica extraction which continued into the 1940s.
- 5.4 The northern part of the area appears to have been developed as enclosed pasture during the 19th century, with the construction of several boundaries and small, presumably stock enclosures. The majority of the area appears to have been left as waste ground and rough woodland by the turn of the last century, remnants of which remain today.
- 5.5 A number of archaeological features survive within the study area and should be taken into account when considering the future management of the area. These may be broken down into those related to mining, quarrying and agriculture. Those features associated with lead mining consist primarily of small shafts, together with the remains of the reservoirs and leat system supplying the boiler house at the Grosvenor Shaft. Apart from the quarries themselves there are few features associated with quarrying, with the exception of a possible magazine, an incline and a loading platform.
- 5.6 Agricultural features consist of a series of relict field banks and walls apparently dating from the later part of the 19th century. The condition and survival of these boundaries could not be determined during the field survey due to vegetation.
- 5.7 The study has therefore provided a first stage of assessment, identifying the main features of archaeological significance within the area of the proposed local nature reserve. However, due to the vegetation and undergrowth at the time of the field survey it was not possible to investigate the majority of the area in any detail and further field visits at a more appropriate time should certainly reveal further information regarding known sites and may well identify a number of previously unrecorded sites.

#### 6 ACKNOWLEDGEMENTS

6.1 CPAT would like to thank the following for their assistance during the project: Glyn Owen and Richard Hankinson, CPAT; Fiona Gale, Denbighshire Countryside Service; Jenny Mitcham, SMR Officer, CPAT; Tony King of Maeshafn; the staff of the County Record Offices at Hawarden and Ruthin, the National Library of Wales and the National Monuments Record.

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Earp, J. 1958. Mineral veins in the Minera-Maesafn district of North Wales. Cardiff: University of Wales Press.

Frost, P. 1994. Clwyd metal mines survey 1993. CPAT Report No. 88.

Lewis, W.J. 1967. Lead mining in Wales. Cardiff: University of Wales Press.

7.2 Documentary sources

A number of relevant documents and plans in the County Record Office at Hawarden (CROH) form part of the Grosvenor collection, with restricted access. Consequently, these sources were not available for the present study but are listed below (prefixed with CROH D/GR).

CROH D/GR/1775. Report of 1897 including a plan for the Halkyn Castle Estate office re: Maesysafn Mines. CROH D/GR/1750. Section drawing CROH D/GR/1769. Plan and section of 1887 CROH D/GR/401. Sale catalogue 1871 CROH D/GR/31. Lease for mining of lead ore on waste ground in Llanferres, 1723 CROH AB/20/4. Mine abandonment plan of Maeshafn (section only) NLW MS6388

7.3 Cartographic sources

Enclosure Award for Llanferres, 1799. CROH D/GR/1268 Tithe Map for Llanferres, 1838 Ordnance Survey Surveyors Drawings No. 341, 1834-6 Ordnance Survey 1st edition 1:2,500, Denbighshire 15.14 and 15 Ordnance Survey 3rd edition 1:2,500, Denbighshire 15.14 and 15 Ordnance Survey 1st edition 6", Denbighshire 20 Ordnance Survey 2nd edition 6", Flintshire 13 SE and SW Ordnance Survey 3rd edition 6", Flintshire 13 SE and SW Ordnance Survey 3rd edition 6", Flintshire 13 SE and SW CROH D/KK/533 and lease D/GR/40. Lease for mining lead ore CROH D/KK/543-4. Plan of lands in Llanferres parish

7.4 Vertical aerial photographic sources Denbighshire County Council 1993. 119-93-185 RAF 1:10,000 coverage, NMR:

1948. 541/208, No 3120 1954. 58/RAF/1461. F21 No 4 and F22 No 4 1954. 540/RAF/1400. F21 No 178

# **APPENDIX 1**

	GAZETT	EER OF AR	CHAEOLOGICAL SITES	
PRN 80200	Moel Findeg Shaft 1			NGR SJ20946139
type Shaft (lead)		period	Modern	
form Earthwork		condition	Damaged	
Shaft recorded by	British Geological survey -	Campbell a	nd Hains 1988, Map 4.	
Site visit 5/7/99. Si	te possibly identified in an	ea of high bra	acken.	
PRN 80201	Moel Findeg Shaft 2			NGR SJ20806102
type Shaft (lead)		period	Modern	
form Earthwork		condition	Damaged	
Shaft recorded by	British Geological survey -	Campbell an	d Hains 1988, Map 4.	
Site visit 5/7/99. Ea	arthwork mound c.8m dian	n and 1.2m h	igh with central hollow in s	ummit. Dense vegetation.
PRN 80202	Moel Findeg Shaft 3			NGR SJ20786096
type Shaft (lead)		period	Modern	
form Earthwork		condition	Damaged	
Shaft recorded by	British Geological survey -	Campbell an	d Hains 1988, Map 4.	
Site visit 5/7/99. Ea vegetation.	arthwork mound c. 12m dia	am and 1.5m	high with central depression	on in summit. Dense
PRN 80203	Moel Findeg Shaft 4			NGR SJ20496093
type Shaft (lead)		period	Modern	
form Earthwork		condition	Damaged	
Shaft recorded by	British Geological survey -	Campbell an	d Hains 1988, Map 4.	
Site visit 5/7/99. Si soil tip surrounding	ubstantial shaft on modera on downslope sides.	te W facing	slope within area of woodla	nd. Shaft c. 6m across with
PRN 80204	Moel Findeg Shaft 5			NGR SJ20766074
type Shaft (lead)		period	Modern	
form Document		condition	Unknown	
Shaft recorded by	British Geological survey -	Campbell an	nd Hains 1988, Map 4.	
Site visit 5/7/99. N	ot located in area of dense	vegetation		
PRN 80205	Moel Findeg Reservoir 1			NGR SJ20766081
type Reservoir		period	Modern	
form Earthwork		condition	Damaged	
Reservoir shown o	n OS 1st ed 25".			
Site visit 5/7/99. Po	ossible reservoir or pond a ings and undergrowth.	long N side (	of boundary PRN 80212. F	lat area c. 15 x 5m within an

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PRN	80206	Moel Findeg Reservoir 2			NGR	SJ2043609	6
type	Reservoir		period	Modern			
form	Earthwork		condition	Damaged			
Rese	rvoir shown or	0 OS 1st ed 25"					

Site visit 5/7/99. Large reservoir measuring c. 80 x 20m, formed by substantial bank up to 4m wide and 2.5m high along W side and S end, with bank 2.5m wide and 1.2m high on E side. Stonework visible in area of oulet sluice at NW corner, with short length of leat leading from it to boundary. Fed by a series of leats, one to SE corner and another on E side.

PRN	80207	Moel Findeg Reservoir 3			NGR	SJ20466105
type	Reservoir		period	Modern		
form	Structure		condition	Damaged		
Rese	voir shown on	OS 1st ed 25"				

Site visit 5/7/99. Large reservoir 34 x 12m surviving almost intact. Stone revetment wall 1.2m high along W and S sides. Sluice visible near NW corner.

PRN	80208	Moel Findeg Reservoir 4			NGR	SJ20456109
type	Reservoir		period	Modern		
form	Earthwork		condition	Damaged		
Rese	voir shown on	OS 1st ed 25"				

Site visit 5/7/99. Large reservoir c. 45 x 18m has been largely destroyed by later quarry PRN 80238. However, although much of the area of the reservoir and the W side has been lost, the banks defining the S, E and N sides survive, together with a possible sluice at the SW corner.

PRN	80209	Moel Findeg Reservoir 5			NGR	SJ20446111
type	Reservoir		period	Modern		
form	Document		condition	Unknown		
Rese	rvoir shown or	OS 1st ed 25"				

Site visit 5/7/99. It was not possible to identify the reservoir, which may have been infilled but is therefore likely to have been preserved.

PRN	80210	Moel Findeg Quarry Magazine		NGR	SJ20536113	
type	Magazine ?	period	Modern			
form	Structure	condition	Danaged			
Shown on OS 3rd ed 25", but not on 2nd edition 6"						

Site visit 5/7/99. Ruins of small rectangular stone building consisting of rubble walls c. 0.8m thick and up to 0.4m high. Overall dimensions c. 5.75 x 4m with entrance at W end.

PRN	80211	Moel Findeg Well			NGR SJ20716097
type	Well		period	Post medieval ?	
form	Document		condition	Unknown	
Wells	shown on OS	1st ed 25			

Site visit 5/7/99. Location of well appears to be marked by area of rhododendron although no structural evidence visible due to dense vegetation.

PRN	80212	Moel Findeg Boundary 1			NGR SJ20766080
type	Boundary		period	Post medieval ?	
form	Earthwork		condition	Damaged	
Boun	dary shown on	OS 1st ed 25"			
Site v	risit 5/7/99. Su	rvives as an earthwork ba	nk up to 2.5r	n wide and 1.2m high, running E-W	V for roughly 60m.

PRN	80213	Moel Findeg Leat 1			NGR SJ20506090
type	Leat		period	Modern	
form	Earthwork		condition	Damaged	

Leat shown on OS 3rd ed 25". Appears as a boundary, although site visit revealed a leat following this course with no evidence for a boundary.

Site visit 5/7/99. The course of the leat can be traced running S-N in the field to the W of the road. A culvert carries the leat beneath the road, reappearing in an area of woodland and running N towards reservoirs. Survives as a ditch up to 1.9m wide and 0.5m deep. Cut by quarry PRN 80230 and at N end by quarry PRN 80234. Another leat PRN 80242 runs from it to W towards reservoir PRN 80206.

PRN	80214	Moel Findeg Boundary 2			NGR	SJ20456098
type	Boundary		period	Modern		
form	Earthwork		condition	Damaged		
Bound	dary shown on	OS 1st ed 25"				

Site visit 5/7/99. Survives as a slight terrace within woodland.

PRN	80215	Moel Findeg Boundary 3			NGR	SJ20476107
type	Boundary		period	Modern		
form	Earthwork		condition	Damaged		
Bound	dary shown on	OS 3rd ed 25"				

Site visit 5/7/99. At the NW end a short length of stub wall is visble against inside of roadside boundary wall. Difficult to identify elsewhere, although may be surviving as an earthwork terrace/slight bank on E side of reservoirs.

PRN	80216	Moel Findeg Boundary 4			NGR SJ20466114
type	Boundary		period	Modern	
form	Earthwork		condition	Damaged	
Boun	dary shown on	OS 3rd ed 25"			

Site visit 5/7/99. Slight lynchet visible at S end of a N-S boundary. Line of boundary probably represented by line or

## hawthorn and coppiced rowans.

PRN	80217	Moel Findeg Boundary 5			NGR SJ20666117
type	Boundary		period	Modern	
form	Earthwork		condition	Damaged	
Deve	den en la companya de la	00 0-1 - 105"			

Boundary shown on OS 3rd ed 25"

Site visit 5/7/99. E-W boundary to S of footpath, turning to N and enclosing NW part of area. Some evidence of earthwork bank but generally not located in dense vegetation.

PRN	80218	Moel Findeg Boundary 6			NGR SJ20516114		
type	Boundary		period	Post medieval ?			
form	Document		condition	Unknown			
Boun	dary shown or	n OS 1st ed 25"					
Site v	visit 5/7/99. No	t identified in dense veget	ation.				
PRN	80219	Moel Findeg Boundary 7			NGR SJ20516115		
type	Boundary		period	Post medieval ?			
form	Document		condition	Unknown			
Boun	dary shown or	n OS 1st ed 25"					
Site v	visit 5/7/99. No	t identified in dense veget	ation.				
PRN	80220	Moel Findeg Boundary 8			NGR SJ20556121		
type	Boundary		period	Modern			
form	Document		condition	Unknown			
Boun	dary shown or	n OS 3rd ed 25"					
Site v	/isit 5/7/99. No	t identified in dense veget	ation.				
PRN	80221	Moel Findeg Boundary 9			NGR SJ20526117		
type	Boundary		period	Post medieval ?			
form	Document		condition	Unknown			
Boun	dary shown or	OS 1st ed 25"					
Site v	Site visit 5/7/99. Not identified in dense vegetation.						
PRN	80222	Moel Findeg Boundary 10	)		NGR SJ20696131		
type	Boundary		period	Modern			
form	Document		condition	Unknown			
Boun	dary shown on	OS 3rd ed 25"					

the second se					
PRN	80223	Moel Findeg Boundary 1	1		NGR SJ20706131
type	Boundary		period	Post medieval ?	
form	Document		condition	Unknown	
Bound	dary shown o	n OS 1st ed 25"			
Site v	isit 5/7/99. N	ot identified in dense vege	tation.		
PRN	80224	Moel Findeg Enclosure 1			NGR SJ20806135
type	Enclosure		period	Post medieval ?	
form	Document		condition	Unknown	
Bound	dary shown o	n OS 1st ed 25"			
Site v	isit 5/7/99. N	ot identified in dense vege	tation.		
PRN	80225	Moel Findeg Enclosure 2	2		NGR SJ20906133
type	Enclosure		period	Modern	
form	Structure		condition	Damaged	
Enclo	sure shown o	n OS 3rd ed 25"			
Site v	isit 5/7/99. R	ectangular enclosure survi	ving as a de	relict stone wall.	
Site v	isit 5/7/99. R 80226	ectangular enclosure survi Moel Findeg Track 1	ving as a de	relict stone wall.	NGR SJ20736101
Site v PRN type	isit 5/7/99. R 80226 Trackway	ectangular enclosure survi Moel Findeg Track 1	ving as a de period	Post medieval ?	NGR SJ20736101
Site v PRN type form	isit 5/7/99. R 80226 Trackway Document	ectangular enclosure survi Moel Findeg Track 1	ving as a de period condition	relict stone wall. Post medieval ? Unknown	NGR SJ20736101
Site v PRN type form Track	isit 5/7/99. R 80226 Trackway Document shown on OS	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel	ving as a de period condition I PRN 80211	relict stone wall. Post medieval ? Unknown	NGR SJ20736101
Site v PRN type form Track Site v	isit 5/7/99. R 80226 Trackway Document shown on Os	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel ot located in dense vegeta	ving as a de period condition I PRN 80211 tion.	Post medieval ? Unknown	NGR SJ20736101
Site v PRN type form Track Site v PRN	isit 5/7/99. R 80226 Trackway Document shown on Os isit 5/7/99. N 80227	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel ot located in dense vegeta Moel Findeg Track 2	ving as a de period condition I PRN 80211 tion.	Post medieval ? Unknown	NGR SJ20736101 NGR SJ20776094
Site v PRN type form Track Site v PRN type	isit 5/7/99. R 80226 Trackway Document shown on OS isit 5/7/99. N 80227 Trackway	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel ot located in dense vegeta Moel Findeg Track 2	ving as a de period condition I PRN 80211 tion. period	Post medieval ? Unknown	NGR SJ20736101 NGR SJ20776094
Site v PRN type form Track Site v PRN type form	isit 5/7/99. R 80226 Trackway Document shown on Os isit 5/7/99. N 80227 Trackway Document	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel ot located in dense vegeta Moel Findeg Track 2	ving as a de period condition I PRN 80211 tion. period condition	Post medieval ? Unknown Post medieval ? Unknown	NGR SJ20736101 NGR SJ20776094
Site v PRN type form Track Site v PRN type form Track	isit 5/7/99. R 80226 Trackway Document shown on OS isit 5/7/99. N 80227 Trackway Document shown on OS	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel ot located in dense vegeta Moel Findeg Track 2 S 1st ed 25"	ving as a de period condition I PRN 80211 tion. period condition	Post medieval ? Unknown Post medieval ? Unknown	NGR SJ20736101
Site v PRN type form Track Site v PRN type form Track Site v	isit 5/7/99. R 80226 Trackway Document shown on OS isit 5/7/99. N 80227 Trackway Document shown on OS isit 5/7/99. N	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel ot located in dense vegeta Moel Findeg Track 2 S 1st ed 25" ot located in dense vegeta	ving as a de period condition I PRN 80211 tion. period condition tion.	Post medieval ? Unknown	NGR SJ20736101 NGR SJ20776094
Site v PRN type form Track Site v PRN type form Track Site v PRN	isit 5/7/99. R 80226 Trackway Document shown on OS isit 5/7/99. N 80227 Trackway Document shown on OS isit 5/7/99. N 80228	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel ot located in dense vegeta Moel Findeg Track 2 S 1st ed 25" ot located in dense vegeta Moel Findeg Quarry 1	ving as a der period condition I PRN 80211 tion. period condition	Post medieval ? Unknown Post medieval ? Unknown	NGR SJ20736101 NGR SJ20776094 NGR SJ20546086
Site v PRN type form Track Site v PRN type form Track Site v PRN type	isit 5/7/99. R 80226 Trackway Document shown on OS isit 5/7/99. N 80227 Trackway Document shown on OS isit 5/7/99. N 80228 Quarry (silica	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel ot located in dense vegeta Moel Findeg Track 2 S 1st ed 25" ot located in dense vegeta Moel Findeg Quarry 1 a)	ving as a de period condition I PRN 80211 tion. period condition tion.	Post medieval ? Unknown Post medieval ? Unknown Modern	NGR SJ20736101 NGR SJ20776094 NGR SJ20546086
Site v PRN type form Track Site v PRN type form Track Site v PRN type form	isit 5/7/99. R 80226 Trackway Document shown on OS isit 5/7/99. N 80227 Trackway Document shown on OS isit 5/7/99. N 80228 Quarry (silica Earthwork	ectangular enclosure survi Moel Findeg Track 1 S 1st ed 25" leading to wel ot located in dense vegeta Moel Findeg Track 2 S 1st ed 25" ot located in dense vegeta Moel Findeg Quarry 1 a)	ving as a de period condition I PRN 80211 tion. period condition tion. period condition	Post medieval ? Unknown Post medieval ? Unknown Unknown Modern Damaged	NGR SJ20736101 NGR SJ20776094 NGR SJ20546086

CPA	T Report No 3	25				Page	13
PRN	80229	Moel Findeg Track 3			NGR	SJ2057608	2
type	Trackway		period	Modern			
form	Earthwork		condition	Unknown			
Track	shown on RA	F 1948 vertical AP.					
PRN	80230	Moel Findeg Quarry 2			NGR	SJ2052608	8
type	Quarry (silica	i)	period	Modern			
form	Earthwork		condition	Damaged			
Site	/isit 5/7/99. Qu	uarry, now overgrown, with	possible loa	ding platform PRN 80231 to SW.			
PRN	80231	Moel Findeg Platform			NGR	SJ2050608	6
type	Platform		period	Modern			
form	Structure		condition	Damaged			
Site v 8023	visit 5/7/99. Su 0. Possibly a l	ibstantial stone revetted pl oading platform for quarry.	atform up to	12m long and 2m high immediate	ly SW	of quarry Pl	RN
PRN	80232	Moel Findeg Quarry 3			NGR	SJ2053608	2
type	Quarry (silica	)	period	Modern			
form	Earthwork		condition	Damaged			
Site v	visit 5/7/99. Sr	nall quarry 4 x 3.5 x 1.5m	close to W b	oundary, possibly for walling mate	rial.		
PRN	80233	Moel Findeg Leat 2			NGR	SJ2046609	9
type	Leat		period	Modern			
form	Earthwork		condition	Damaged			
Site v	visit 5/7/99. Pr	obable leat running NE-SV	V to join leat	PRN 80242.			
PRN	80234	Moel Findeg Quarry 4			NGR	SJ2049610	1
type	Quarry (silica	)	period	Modern			
form	Earthwork		condition	Damaged			
Site v	visit 5/7/99. Su	ibstantial quarry, now over	grown. Spoil	tips to W.			
PRN	80235	Moel Findeg Quarry 5			NGR	SJ2056610	0
type	Quarry (silica	)	period	Modern			
form	Earthwork		condition	Damaged			
Site v	visit 5/7/99. Su	ıbstantial quarry, now over	grown. Poss	ible incline PRN 80236 runs down	from o	quarry to NV	V.
PRN	80236	Moel Findeg Quarry Inclin	ne		NGR	SJ2052610	0
type	Incline ?		period	Modern			
form	Earthwork		condition	Damaged			
Site v quarr	visit 5/7/99. Po y PRN 80235.	ssible incline visible on RANN Near base two timbers wit	AF 1948 vert th fixing bolt	ical. Survives as an even gradien s were noted.	t track	leading up t	0

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PRN 80237 Moel Findeg Quarry 6		P	NGR SJ20526107			
type Quarry (silica)	period	Modern				
form Earthwork	condition	Damaged				
Site visit 5/7/99. Substantial quarry, now over	grown.					
PRN 80238 Moel Finder Quarry 7			NGR S.120446109			
type Quarry (silica)	period	Modern				
form Earthwork	condition	Damaged				
Site visit 5/7/99. Substantial quarry, now over	grown.					
PRN 80239 Moel Findeg Quarry 8			NGR SJ20526123			
type Quarry	period	Modern				
form Earthwork	condition	Damaged				
Site visit 5/7/99. Small area of linear quarryin	g along a roo	ck outcrop, probably for walling ma	aterial.			
PRN 80240 Moel Findeg Leat 3			NGR SJ20466091			
type Leat	period	Modern				
form Earthwork	condition	Damaged				
Site visit 5/7/99. Leat feeding into SE corner of deep.	of reservoir F	PRN 80206, survivng as ditch up to	o 1.3m wide and 0.4m			
PRN 80241 Moel Findeg Leat 4			NGR SJ20516092			
type Leat	period	Modern				
form Earthwork	condition	Damaged				
Site visit 5/7/99. Faint traces of a probable leat running roughly parallel to and upslope from PRN 80213. Cut by quarry PRN 80230. At S end, survives as a ditch c. 0.7m wide and 0.3m deep with slight bank 1.2m wide and 0.5m high max along W downslope side.						
PRN 80242 Moel Findeg Leat 5			NGR SJ20466096			
type Leat	period	Modern				
form Earthwork	condition	Damaged				
Site visit 5/7/99. Leat shown on OS 3rd edition 1:2,500 in association with PRN 80213. Runs downslope from 80213 to W towards reservoir PRN 80206 and is joined by a further probable leat PRN 80233 from NE.						
PRN 80243 Moel Findeg Mound			NGR SJ20466114			
type Mound	period	Unknown				
form Earthwork	condition	Damaged				
Site visit 5/7/99 Earthen mound c. 8.5x5x1.5	m adjacent t	o boundary PRN 80216.				

#### **APPENDIX 2**

#### SPECIFICATION

#### 1 Introduction

- 1.1 In order to produce a management plan for a proposed Local Nature Reserve on Moel Findeg (SJ206612), a detailed archaeological survey is required in order to provide a better understanding of the archaeological resource and the historical development of the area concerned.
- 1.2 No known archaeological sites are recorded in the Regional Sites and Monuments Record, although an area of lead mining lies just outside the area to the west. Features associated with the industry are assumed to extend within the study area.
- 1.3 A Brief (dated 21 May 1999) has been prepared by Fiona Gale, Denbighshire Countryside Service, which describes the scheme of archaeological works required.

#### 2 Objectives

- 2.1 The objective of the survey is identify the nature, condition and extent of the archaeological resource within the study area, including an understanding of the past use and development of the site.
- 2.2 The end product will be a report outlining the results of the survey.

#### 3 Methods

- 3.1 A thorough Desk-based study of the study area will include documentary, cartography and aerial photographic sources held at the following repositories: National Library of Wales, Aberystwyth; National Monuments Record, Royal Commission on Historical and Archaeological Monuments in Wales, Aberystwyth; County Records Offices at Hawarden and Ruthin; Denbighshire Countryside Service; Clwyd-Powys Archaeological Trust, Welshpool.
- 3.2 The Desk-based study will identify and record all sites of archaeological potential including a basic description of the site, its location and the source of the information. Any sites revealed from aerial photographic sources will be included but not plotted. Copies of relevant historic maps will be obtained where possible for inclusion in the final report.
- 3.3 A thorough walkover field survey will be undertaken to cover the entire area and locate all non-natural features. This will take the form of a transect survey with the whole area walked on transects of no more than 30m apart unless otherwise dictated by topography or vegetation. All sites will be recorded on record sheets and plans provided by Denbighshire Countryside Service.
- 3.4 Following the on-site work an illustrated and bound report will be prepared according to the principles laid out in the Curatorial Brief. This will be in A4 format and contain conventional sections on: Site location, Topography and Geology; Historic Background; Survey; Conclusions and Recommendations and References, together with appropriate appendices. The report will described the finds of the survey and attempt to interpret the evidence to describe the development of the site.
- 3.5 The site archive will be prepared to specifications laid out in Appendix 3 in the <u>Management of</u> <u>Archaeological Projects</u> (English Heritage, 1991).

#### 4 Resources and Programming

- 4.1 The survey will be undertaken by a small team of 2 skilled archaeologists. Overall supervision will be by R.J.Silvester, 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 archaeologists who conducted the survey.
- 4.3 It is anticipated that the desk-based study will take 3 days and the field element of the survey will take no more than 1 day in all, and that the subsequent report would be prepared immediately thereafter. 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 draft report will be completed by July 2nd 1999 and the final report completed within one week of receiving comments from Denbighshire Countryside Service.
- 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.

N.W.Jones 1st June 1999



Fig. 1 Location of study area, scale 1:25,000



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Fig. 3 Tithe Survey of 1838





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Fig. 5 Ordnance Survey 3rd edition 1:2,500, Denbighshire 15.14, revised 1910.

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