THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

Moel Findeg Local Nature Reserve, Denbighshire

TOPOGRAPHICAL SURVEY

CPAT Report No 797

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Report for Denbighshire County Council

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CONTENTS

Figures

1 INTRODUCTION

1.1 In 1999 the Clwyd-Powys Archaeological Trust (CPAT) undertook an assessment (Jones 1999) in connection with proposals to create a Local Nature Reserve on Moel Findeg (SJ 206612), near Maeshafn, Denbighshire. In late 2005 CPAT was invited to undertake a detailed ground survey of part of the Reserve which contained earthwork remains relating to Maeshafn lead mine, principally comprising a series of leats and reservoirs.

1.2 The majority of information relating to the study area is associated with Maeshafn lead mine. It would seem that mining began in the general area during the 17th century, 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.

1.3 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. Power was provided at the 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 partly destroyed during later silica extraction, although the remaining reservoir was subsequently used to supply water to Maeshafn village from 1906.

2 GROUND SURVEY

2.1 The ground survey was undertaken using total station surveying, with a Leica TC500 EDM in conjunction with Penmap survey software. The survey was located with reference to digital Ordnance Survey data provided by Denbighshire County Council as a best fit against published boundaries. The results from the survey are presented here in a series of plots (Figs 1-3), together with profiles of the main features (Figs 4-9).

2.2 The largest reservoir (PRN 80206), which is now heavily silted, lies in an area of woodland close to the western boundary of the Reserve. The reservoir, which is *c.* 80m long and 20m wide, is formed by a substantial bank 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 feeder leat (PRN 80204) leading to the south-east corner and another running from the outlet sluice northwards.

2.3 A series of three reservoirs formerly served the boiler house at Grosvenor Shaft. The southernmost of these remains fairly intact, measuring *c.* 34 by 12m (PRN 80234). 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 middle reservoir (PRN 80238) has been largely destroyed by later quarrying, although part of the southern end can still be identified. The northernmost reservoir (PRN 80209) has also been partly lost to quarrying, as well as being partly infilled.

2.4 The reservoirs were fed by a series of leats, of which the primary leat (PRN 80213) survives as a substantial earthwork which contours the hillside from the south. The leat was formed by an earthen bank up to 1.1m high and 4.5m wide on the upslope side of which was a channel 0.65m wide and up to 0.7m deep, the sides of which are in places near vertical, suggesting some form of revetment. The leat runs from south to north and originally carried water from a now silted reservoir 250m to the south-east, outside the boundaries of the Reserve. A series of leats, including PRNs 80233 and 80242 would have enabled the diversion of water to supply the main reservoir (PRN 80206). Immediately upslope of the primary leat is a further, shallow leat (PRN 80241), which does not appear to have been fed from a particular source but appears to have gathered surface water from the slope above and unusually slopes in either direction from the central high point.

2.5 The survey also recorded a stone-revetted loading platform (PRN 80231) associated with a nearby quarry, and a collapsed mine shaft (PRN 80203).

2.6 Towards the southern corner of the Reserve a separate total station survey recorded the earthwork remains of a small reservoir (PRN 80205). This consisted of a retaining bank 55m long and up to 1.2m high and 4m wide which now has a substantial breach, presumably where the sluice was originally located. The reservoir was fed by a leat leading from a spring. Water from this reservoir would have been carried by a leat, which no longer traceable, to a reservoir beyond the boundaries of the Reserve, which itself supplied the series of reservoirs described above.

2.7 Some 35m to the north the survey also recorded what appears to be the infilled remains of a small shaft and spoil mound.

3 CONCLUSIONS

3.1 The survey has provided a detailed record of the more important surviving earthwork remains within the Reserve which relate to Maeshafn Lead Mine. Of the five reservoirs, three are relatively well-preserved, while the other two have been damaged by later quarrying. Similarly, much of the leat system which supplied water to the reservoirs also remains clearly visible, although again sections have been lost to quarrying.

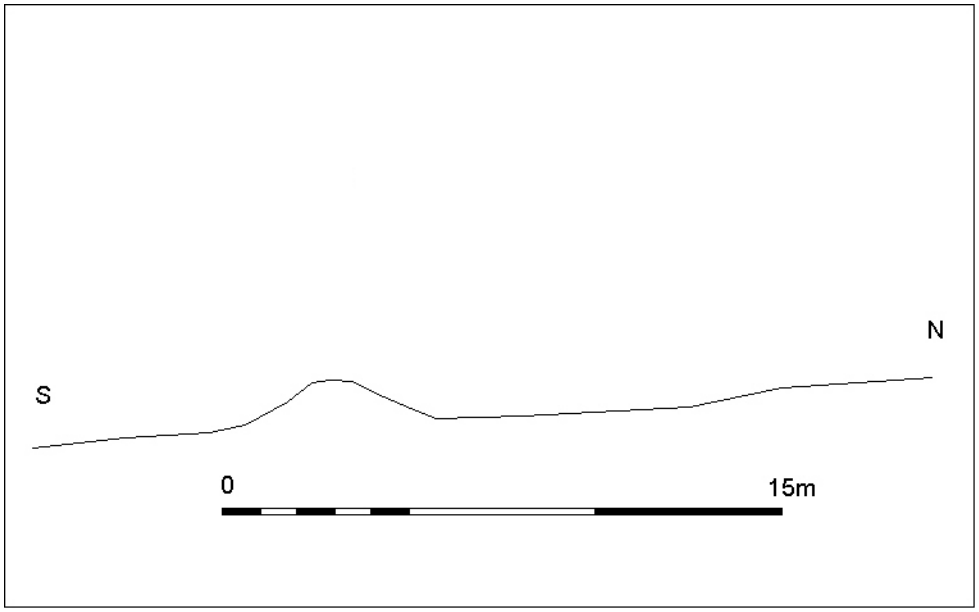

Fig. 4 Profile of pond PRN 80205

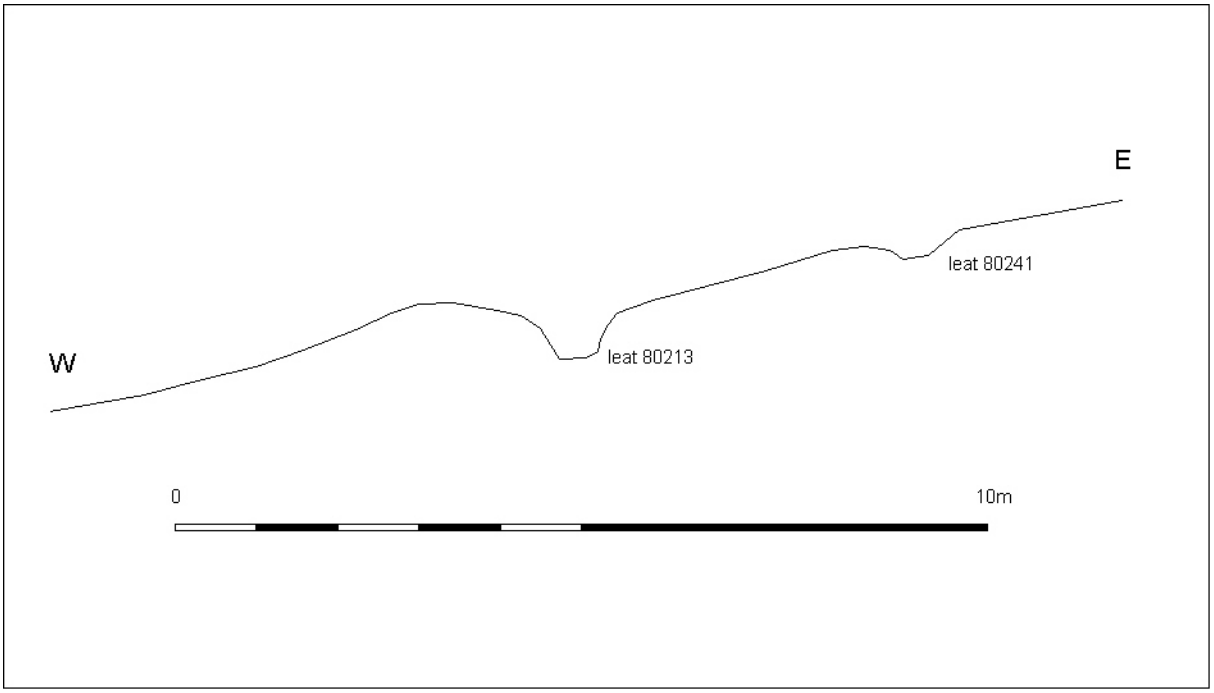

Fig. 5 Profile of leats PRN 80213 and 80241

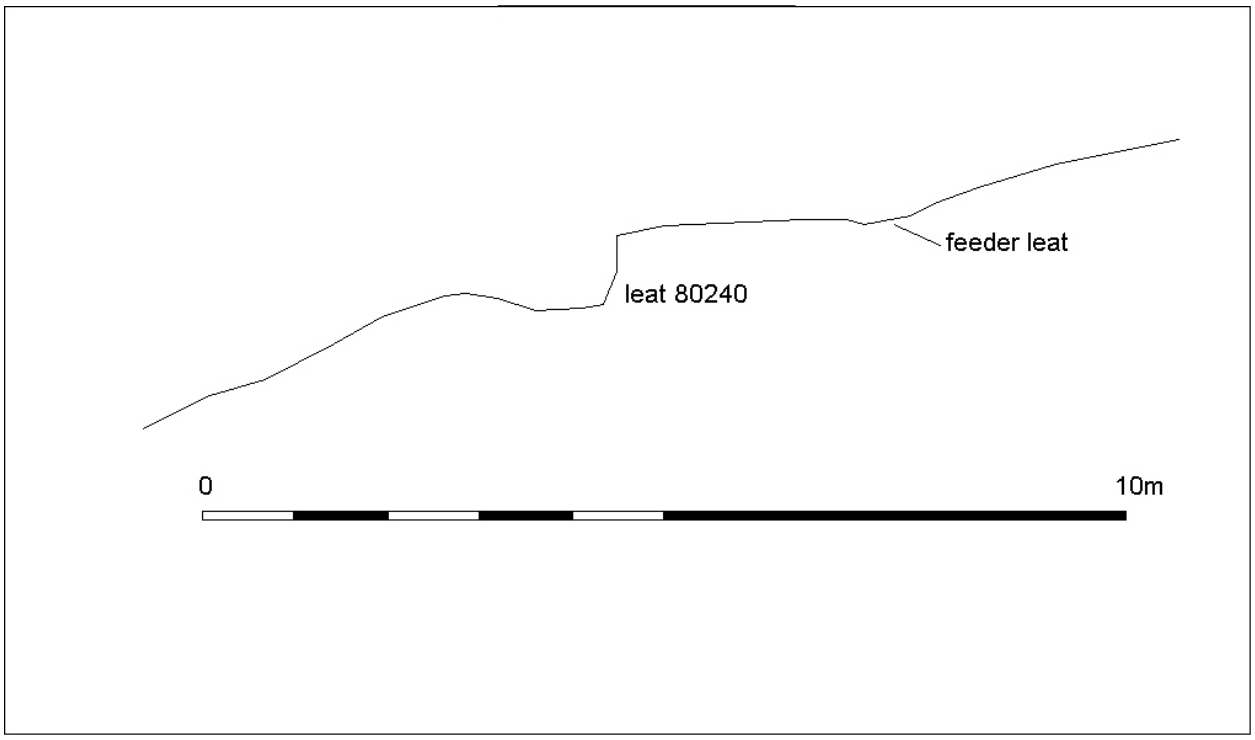

Fig. 6 Profile of leat PRN 80240

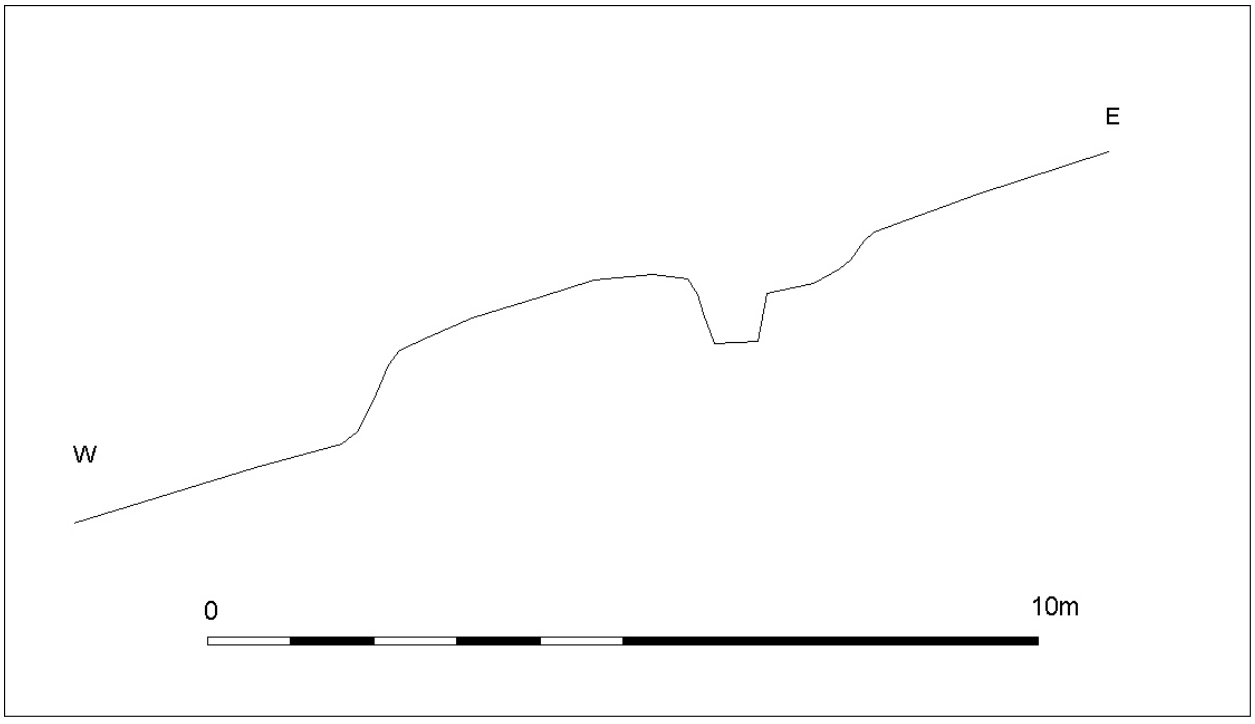

Fig. 7 Profile of leat PRN 80213

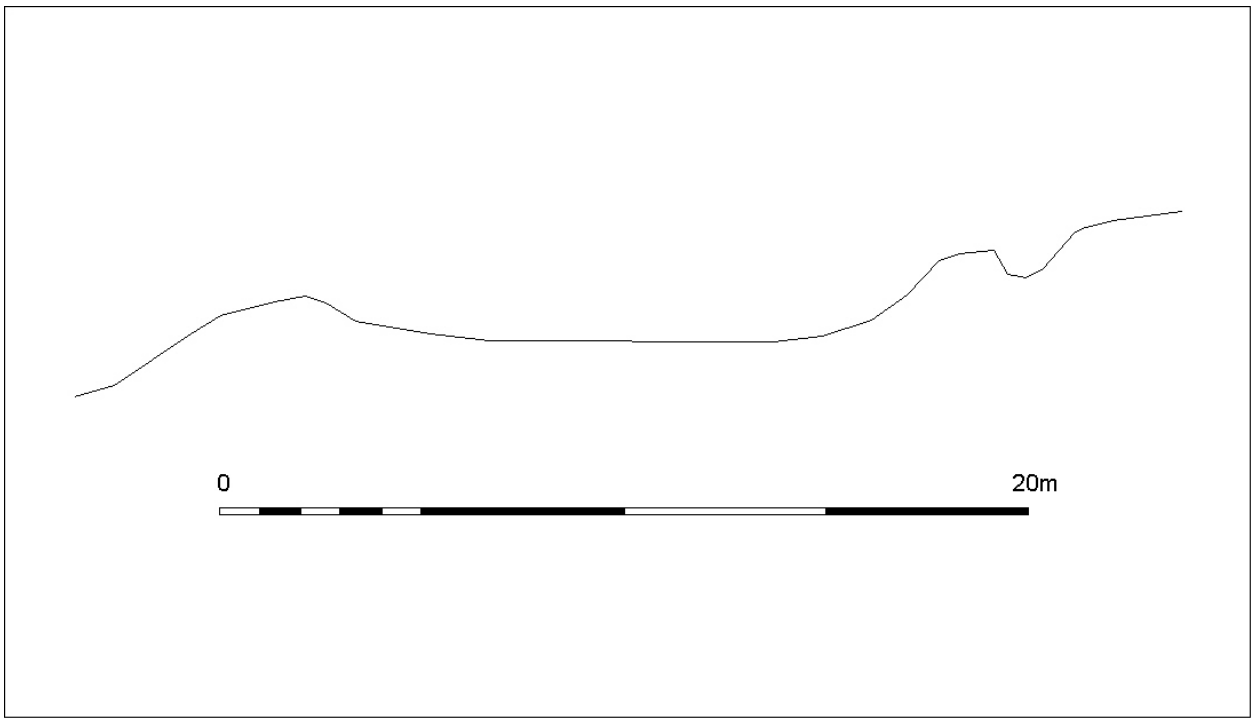

Fig. 8 Profile of reservoir PRN 80206

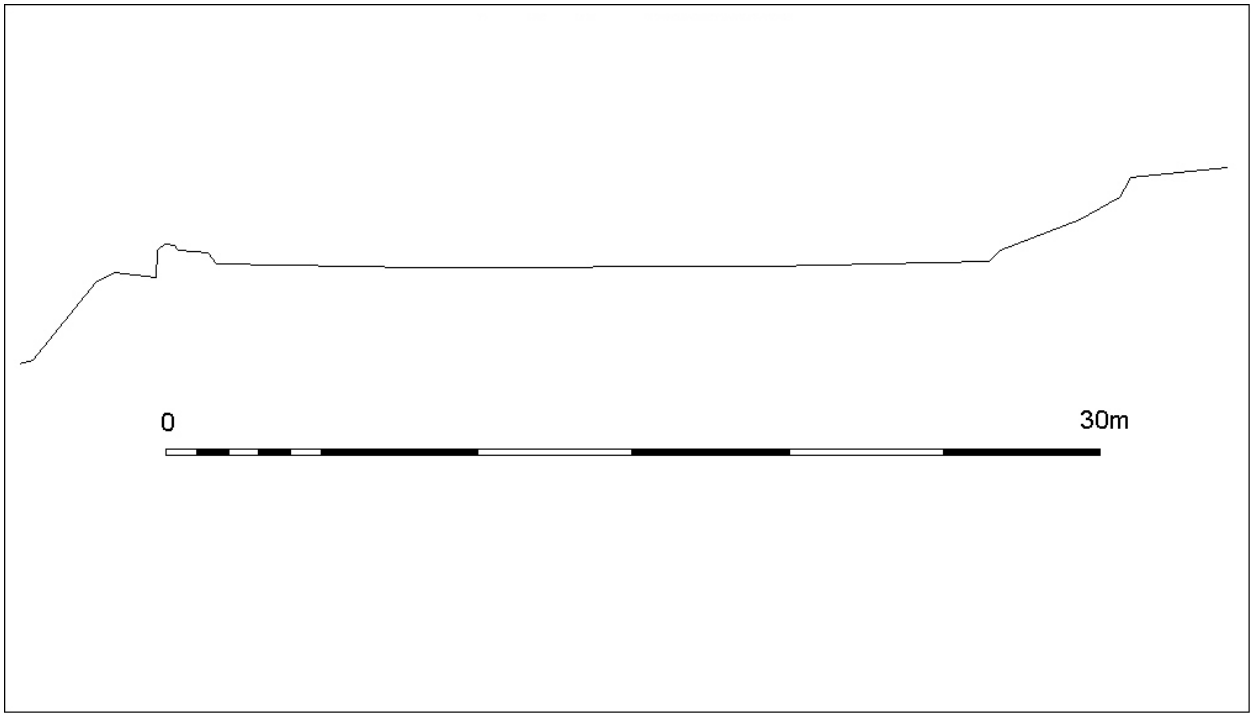

Fig. 8 Profile of reservoir PRN 80207