

NANT YR EIRA MINE

HAFREN FOREST

PHOTOGRAPHIC SURVEY

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NANT YR EIRA MINE

HAFREN FOREST

PHOTOGRAPHIC SURVEY

REPORT COMMISSIONED BY

MS. M. BROMLEY

ON BEHALF OF

**FOREST ENTERPRISE
CANOLBARTH DISTRICT
BWLCH NANT YR ARIAN
PONTERWYD
ABERYSTWYTH
SY23 3 AD**

UNDERTAKEN BY:

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Synopsis:

Nant-yr-Eira Mine is located on the western edge of Hafren Forest owned and managed by Forest Enterprise. The Bronze Age open-cut, the processing areas around the crusher house and the reservoir dam and wall form the Scheduled Ancient Monument Mg 226 (POW), designated because the mine is considered to be of national significance.

While most of the processing area of the site has because of its nature remained on unplanted ground, the sides of the Bronze Age open-cut and the area around the reservoir and dam wall had become enclosed by a mature conifer crop.

In Spring 2000, a programme to clearfell the conifer crop surrounding the mine site, as outlined was designed and subsequently implemented by Forest Enterprise and their Harvesting Contractors to integrate the mine features into their forest environment with the benefit of consolidating the site in open space.

The work was undertaken Autumn / Spring 2001, following Scheduled Monument Consent, which requested a photographic survey of the works, prior to and following harvesting.

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1. Introduction

Location

1.1 Nant-yr-Eira Mine (*PRN 725; SN 8270 8730*) lies east of Plinlimon, on the western edge of Hafren Forest owned and managed by Forest Enterprise. The mine site is mainly located on unplanted ground along the Nant yr Eira stream and its northern tributary. The mine site extends from the reservoir and dam (*PRN 20899; SN 82672 87709; Plates 27-28*) in the north, south to the extensive spread of fine waste and the buddle (*PRN 18543; SN 82730 87230; Plates 7-8*) on open ground adjacent to the forest boundary fence (*Fig.1 overleaf*).

1.2 Prior to the recent clearfell, the site was surrounded on three sides by a mature conifer crop with open views to the south, towards the moorland on Hore Fach.

Geology

1.3 The solid geology are Ordovician rocks of the Lower Van formation gritstones. The mine has been worked for lead, copper and silver from Prehistoric times to the last documented record of production in 1883.

Scheduled Area

1.4 The site has been designated a Scheduled Ancient Monument (*SAM Mg 226 (POW)*) for its important Industrial Archaeological remains. The Scheduled Area, which formerly comprised the Bronze Age open-cut (*PRN 18531; Plates 19-20*) worked from c.2,000 years ago and reworked in the 19th century, was extended following survey work in 1994 to include the 19th century processing area, centred around the crusher house and wheelpit (*PRNs 18536-7; Plates 7-10*) and extending south to areas of processing waste; all of which provide important examples of mining technology of diverse periods.

1.5 A second area around the reservoir and dam (*PRN 20899*) was designated to be of Scheduled Monument status following survey work in 1998.

2. Clearfell Methodology

2.1 A programme to clearfell the conifer crop surrounding the mine site, as outlined on Fig.1, was designed and subsequently implemented by Forest Enterprise and their Harvesting Contractors to:

- integrate the mine features into their forest environment with the benefit of consolidating the site in open space
- to harvest by whole tree removal
- to fell away from all mine features
- to extract while protecting the mine features
- to stack away from the mine site
- to remove all brash from 20m around the Scheduled Area.

2.2 Scheduled Monument consent for the harvesting work was granted in June 2000. Following recommendations from Cadw: Welsh Historic Monuments and in accordance with 'Forest and Archaeology guidelines for Forest Enterprise Wales' (1998, pp 4-6), a photographic record of the mine site was required prior to and following the clearfell operation.

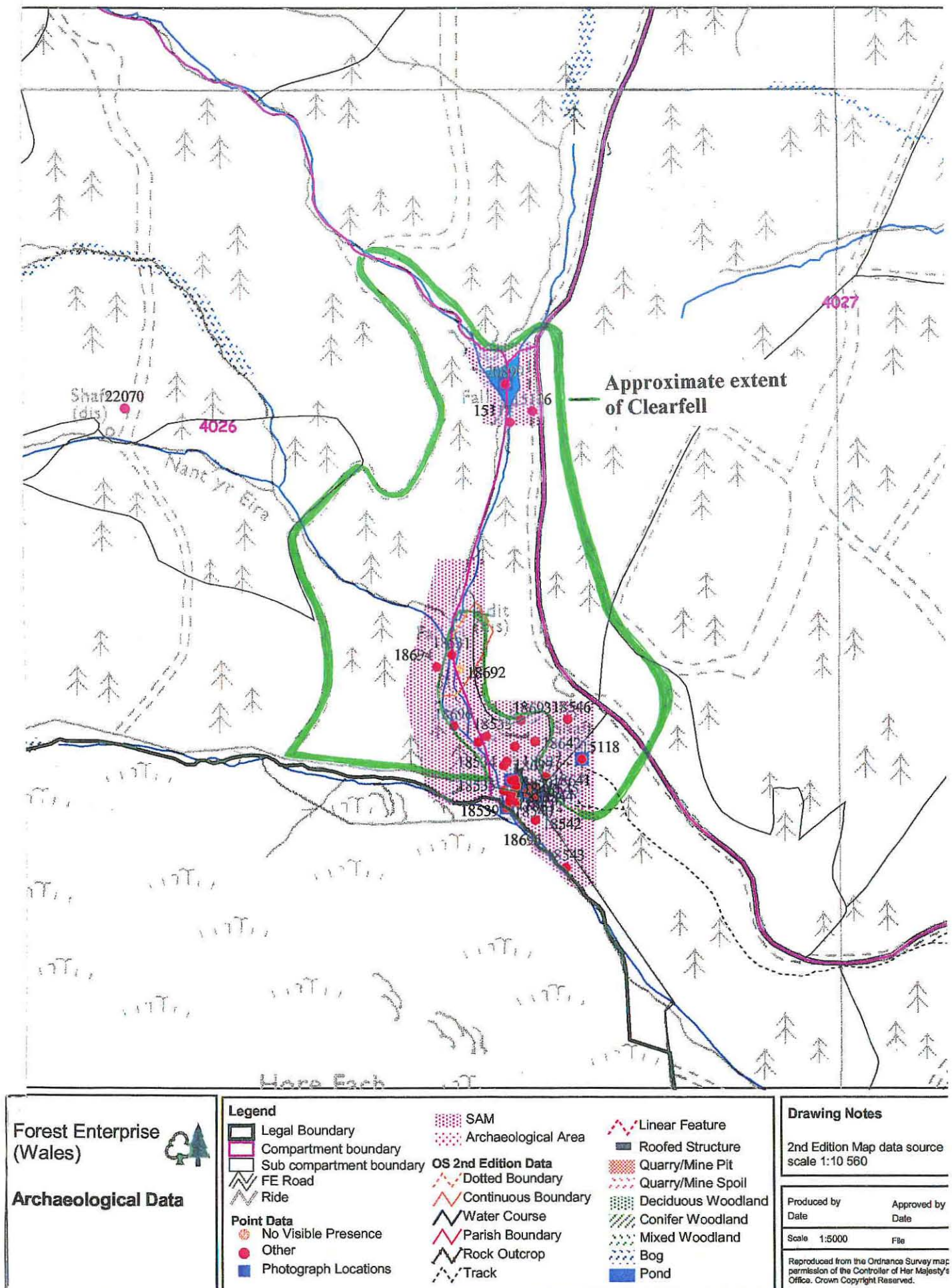


Fig.1 Area of Hafren Forest showing Archaeological Data, the extent of the Scheduled Area around Nant-yr-Eira Mine and the approximate extent of the area of Clearfell.

3. Archaeological Contract

3.1 In July 2000, the contractor was appointed by Michelle Bromley (*Conservation Manager, Canolbarth Forest District*) acting on behalf of Forest Enterprise, to undertake the Photographic Survey in accordance with the *Schedule and Agreement No. CSM003:00/01*. The schedule included a photographic survey to be undertaken prior to commencement of the works in August 2000, and following completion of the harvesting work in April 2001. The photographic record forms Section 4 of this report.

3.2 Additional photography not included as Section 4 of this report, will be deposited according to the Archive outlined in Section 7.

3.3 Individual sites are referenced by their Primary Record Numbers (*PRNs*), which were allotted to individual features following the 1994 mines survey (*Jones & Frost; CPAT Report No. 111*) and the 1998 Welsh Heritage Assets Project.

Section 4.

Photographic Survey:

List of Plates:

- Plate 1 View west over Nant yr Eira Mine (725) from forestry track, prior to clearfell. (August 2000)
- Plate 2 View as above, following harvesting operations (April 2001).
- Plate 3 View west of lower mine site (processing areas), prior to clearfell. (August 2000)
- Plate 4 View as above, following harvesting operations (April 2001).
- Plate 5 View west from mine building 15118 towards main mine site showing open views following clearfell. (April 2001)
- Plate 6 View north over tramway, following harvesting operations (April 2001).
- Plate 7 View north to main mine site prior to clearfell. (August 2000)
- Plate 8 View as above, following harvesting operations (April 2001).
- Plate 9 View north-east to crusher house and lower processing area, prior to clearfell. (August 2000)
- Plate 10 View as above, following harvesting operations (April 2001).
- Plate 11 View west to bank of ore-bins 18535, prior to clearfell. (August 2000)
- Plate 12 View as above, following harvesting operations (April 2001).
- Plate 13 View east towards mine building 15118, obscured by conifer crop, prior to harvesting. (August 2000)
- Plate 14 View east as above following harvesting. (April 2001)
- Plate 15: View north-west along tramway 18534, towards the Bronze Age open-cut (18531) obscured by conifer crop. (August 2000)
- Plate 16: View north-west as above following harvesting. (April 2001)
- Plate 17: View south down Nant yr Eira from the open-cut, prior to harvesting. (August 2000)
- Plate 18: View south, as above, following harvesting operations. (April 2001)
- Plate 19: View north of the open-cut workings, prior to harvesting. (August 2000)
- Plate 20: View north, as above, following harvesting operations. (April 2001)
- Plate 21: View west to pier base 18696, no longer overshadowed by conifers. (April 2001)
- Plate 22: View west at north end of open-cut in main clearfell area. (April 2001)
- Plate 23: View to north-west to main area of clearfell at north end of open-cut. (April 2001)
- Plate 24 View south into north end of Bronze Age open-cut workings (18521). (April 2001)
- Plates 25 & 26: View west to rock-cut level 15117. (April 2001)
- Plate 27 View north to reservoir dam wall (20899), prior to clearfell. (August 2000)
- Plate 28: View north, as above, following harvesting operations. (April 2001)

- Plate 29: View north to reservoir dam wall (20899), prior to clearfell. (August 2000)
- Plate 30: View north, as above, following harvesting operations. (April 2001)
- Plate 31: View west to reservoir and dam wall (20899), following harvesting operations. (April 2001)
- Plate 32: As above, following harvesting operations, showing reservoir now on open ground. (April 2001)



Plate 1 *above*: View to west, from forestry track towards Nant yr Eira Mine site, prior to harvesting operations. The crusher house wheelpit (18536) and the platform to the south of it (18538) together with two spoil tips can be seen to the left of the clearfell. (August 2000)

Plate 2 *below*: View west following harvesting operations (April 2001)





Plate 3 *above*: View west of lower mine area prior to harvesting. The building on the left of the photograph is the mine building (15118) located east of the main site, located following previous felling operations.
(August 2000)

Plate 4 *below*: View west following harvesting operations. Harvesting has opened up clear views from the east towards the crusher house complex.
(April 2001)





Plate 5 *above*: View west following harvesting operations from mine building 15118 towards the main site. Harvesting has opened up views towards the earthworks of a spoil tip tramway which extended in a north / south direction. Route of tramway indicated by white line. (April 2001)

Plate 6 *below* View northwards over the tramway; route indicated by 2m scale and white line. (April 2001)





Plate 7 *above*: View north over Nant yr Eira stream to main mine site, prior to harvesting. Spoil relating to jigging operations can be seen in the foreground and the crusher house, wheelpit and platform area are north of the fenceline, between 2 areas of tipping. The tip on the west side includes ore-bins 18535. (August 2000)

Plate 8 *below* View following harvesting. (April 2001)





Plate 9 *above*: View north-east towards crusher house wheelpit (18536) and the platform to the south of it (18538). Mine building 15118 can be seen in the distance to the right of the conifers, prior to harvesting. (August 2000)

Plate 10 *below*: View following harvesting operations. (April 2001)





Plate 11: View west to bank of ore-bins 18535, prior to harvesting. (August 2000)



Plate 12: View of ore-bins 18535, following harvesting. (April 2001)



Plate 13 *above*: View east towards mine building 15118, obscured by conifer crop, prior to harvesting. (August 2000)

Plate 14 *below*: View east following harvesting, which has opened up a clear view from the main mine site. (April 2001)





Plate 15: View to north-west along tramway 18534, towards the Bronze Age open-cut (18531) obscured by conifer crop. (August 2000)



Plate 16: View north-west following harvesting, which has opened up a clear view towards the open-cut. (April 2001)



Plate 17: View south down Nant yr Eira from the open-cut workings, prior to harvesting. (August 2000)



Plate 18: View south following harvesting operations. (April 2001)



Plate 19: View north of the open-cut workings, prior to harvesting. (August 2000)

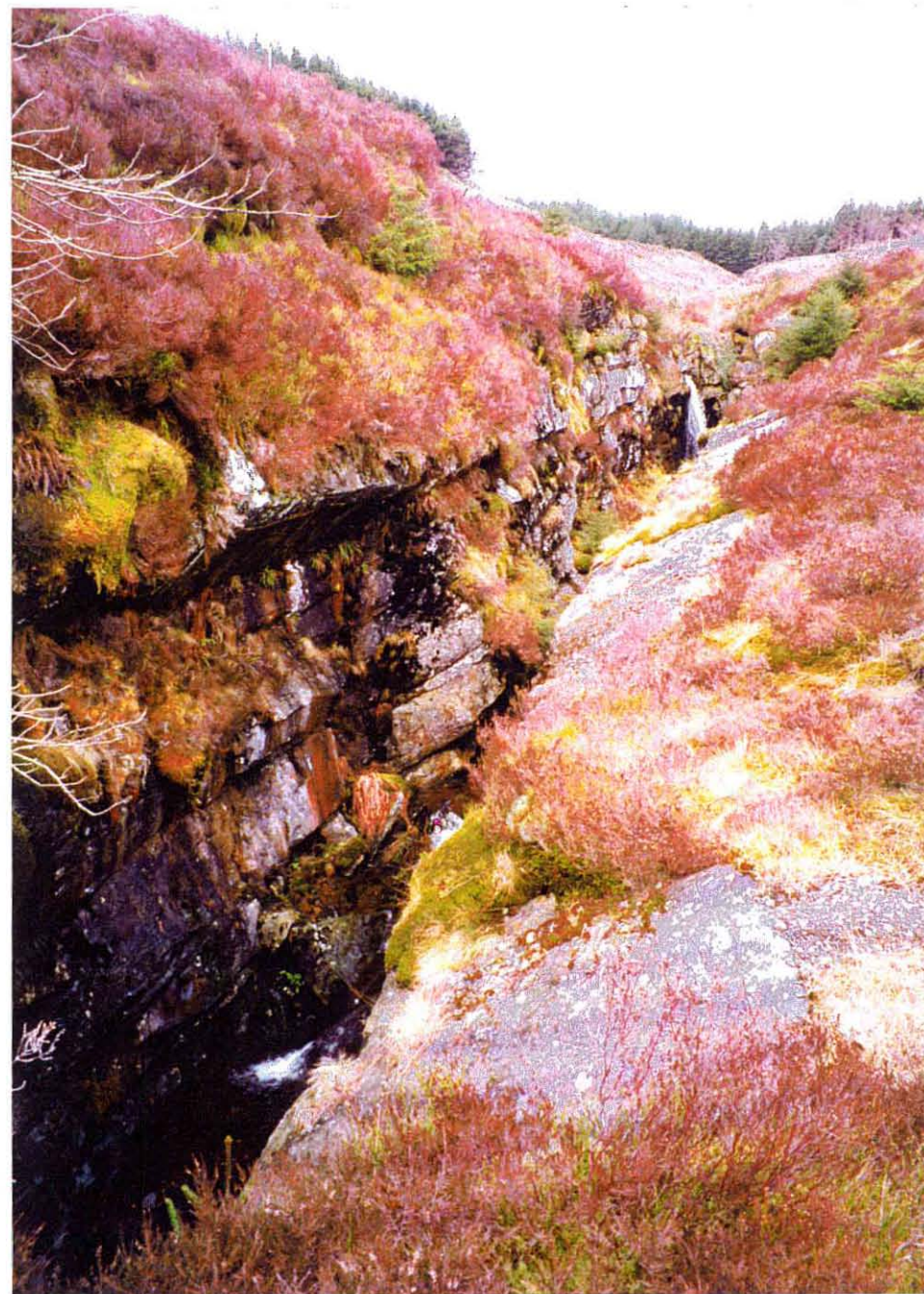


Plate 20: View north following harvesting operations. (April 2001)



Plate 21: View west to pier base 18696, which presumably helped Transport the diverted stream across the bottom of the open cut to feed the crusher house leat. Pier base no longer overshadowed by conifers. (April 2001)



Plate 22: View west from north end of open-cut shows confluence of north-south and west-east flowing streams in area of 'rock bridge' (April 2001)



Plate 23: View to north-west over top of open-cut towards the large area of clearfell.

The clearfell operations have opened up in particular the area around the Bronze Age open-cut (18531) and the reservoir (20899). The north side of the cut was previously obscured from view.
(April 2001)



Plate: 24

View to south into north end of Bronze Age open-cut workings (18521), following harvesting. View had previously been obscured by the overhanging conifer crop.

(April 2001)



Plates 25 & 26: View west to rock-cut level 15117; cut in west on the right bank of the stream, following removal of overhanging conifer crop. Level located downstream of the dam wall. (April 2001)



Plate 27 *above*: View north of Reservoir dam wall (20899), prior to harvesting. (August 2000)

Plate 28 *below*: View following harvesting, which has removed the crop which was threatening the structure of the dam. (April 2001)





Plate 29 *above*: View north to reservoir dam wall (20899), prior to clearfell. Conifer crop can be seen to be in close proximity to the structure, particularly on the right (east side). (August 2000)

Plate 30 *below*: View north, as above, following harvesting operations. (April 2001)





Plate 31 *above*: View west across the reservoir and dam wall (20899), following harvesting operations, which have removed the threat to the structure of the dam. (April 2001)

Plate 32 *below*: View west, following harvesting operations, showing reservoir now displayed on open ground. (April 2001)



5. Conclusions

- 5.1 No archaeological features have been damaged as a result of the harvesting operations or the construction of temporary log stream crossings to facilitate the operations.
- 5.2 Trees were felled away from the site and all brash has been removed to form a 20m buffer zone around both scheduled areas.
- 5.3 Access to certain areas of the site, primarily the area of the reservoir and dam (20899) and the Bronze Age open cut (18531) have been enhanced by the clear fell.
- 5.4 The prevention of damage to the dam wall has been aided by the removal of the conifer crop, which was threatening the structure.
- 5.5 Hafren Forest is a popular recreational area. The mine site is depicted on the picnic area notice board and a trail is planned to include a visit to the mine site, which had already been on the route of a forest trail, although access had become extremely difficult through the mature crop. Cadw had considered that the proposed plan to clear the trees from the site would be of long term benefit to the monument. Following harvesting, the site will be maintained on open ground.

6. Bibliography

Jones, N.W., & Frost, P., 1994, *Powys Metal Mines Ground Survey*.
CPAT Report No. 111. February 1995.

Welsh Heritage Assets Project, *Hafren Forest Archaeological Assessment*.
CPAT Report No. 281

Section 7

Archive:

*Main archive deposited at the National Monuments Record, RCAHMW, Crown Buildings,
Plas Crug, Aberystwyth. SY23 1NJ*

Includes:

Copy of report

Colour print film

B & W film

Colour Slide film

Selected archive deposited:

Cadw: Welsh Historic Monuments, Cathays Park, Cardiff. CF 10 3 NQ

CPAT, 7a Church Street, Welshpool, Powys. SY 21 7DL

Forest Enterprise: Canolbarth District, Bwlch Nant yr Arian, Ponterwyd, Aberystwyth. SY23 3AD