

ARCHAEOLOGICAL
SERVICES
DURHAM UNIVERSITY

on behalf of
Atkins

Barneycraig
Mine Water Treatment Scheme
Carrshield
Northumberland

archaeological monitoring

report 3711
March 2015

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1. Summary

The project

- 1.1 This report presents the results of an archaeological watching brief conducted during works at Carrshield Lead Mine and Ore Works. The works consisted of monitoring during the excavation of machine and hand-excavated geotechnical test pits within the boundary of the Scheduled Ancient Monument.
- 1.2 The works were commissioned by Atkins and conducted by Archaeological Services Durham University.

Results

- 1.3 The Barneycraig Adit Culvert was partially exposed in hand-excavated Test Pit 1.
- 1.4 In-hand excavated test pits 3, 4 and 5, a cast iron drain pipe was exposed.
- 1.5 Test pits 6 and 7 contained mining waste overlain by a very thin topsoil.
- 1.6 In machine excavated test pits 1, 3 and 9 the stratigraphy was identical, consisting of mining waste overlain by a thin topsoil.
- 1.7 No artefacts were recovered during the course of the works.

2. Project background

Location (Figure 1)

- 2.1 The site of the Scheduled Ancient Monument at Carrshield Lead Mine and Ore Works (SM28541; HA1015849) is located 12km east of Alston and borders the east bank of the River West Allen, Northumberland (NGR centre: NY803468). The site is within the North Pennines Area of Outstanding Natural Beauty (AONB), The North Pennine Moors Special Area of Conservation (SAC) and the North Pennines Special Protection Area (SAC). The site is bound to the east by an unmarked road, to the west by the River Allen, and to the south by a stone bridge giving access to Smallburns Farm.

Development

- 2.2 The works consisted of the excavation of geotechnical test pits as part of the Barneycraig Mine Water Treatment Scheme feasibility study.

Objective

- 2.3 The objective of the monitoring programme was to identify and record any archaeological features or artefacts uncovered during groundworks.

Written Scheme of Investigation

- 2.4 The works have been undertaken in accordance with a Written Scheme of Investigation provided by Archaeological Services Durham University (reference DS15.45) and approved by the planning authority. Scheduled Ancient Monument consent has been granted for the works (reference SO0102820).

Dates

- 2.5 Fieldwork was undertaken between 27th February and 5th March 2015. This report was prepared for March 2015.

Personnel

- 2.6 Fieldwork was conducted by Alan Rae. This report was prepared by Alan Rae, and edited by Peter Carne, with graphics by David Graham. The Project Manager was Daniel Still.

Archive/OASIS

- 2.7 The site code is **CBC15**, for **Carrshield BarnyCraig 2015**. The archive is currently held by Archaeological Services Durham University and will be transferred to Berwick Record Office in due course. Archaeological Services Durham University is registered with the **Online AccesS to the Index of archaeological investigationS** project (**OASIS**). The OASIS ID number for this project is **archaeol3-204993**.

3. Landuse, topography and geology

- 3.1 The site is located within the former Carrshield Lead Mine and Ore Works.
- 3.2 The area was predominantly level with a mean elevation of approximately 414m OD.
- 3.3 The underlying geology of the site consists of solid bedrock of the Alston Formation comprising limestone, siltstone, mudstone and sandstone overlain by glacial drift deposits.

4. Archaeological and historical background

Previous archaeological works

- 4.1 Archaeological monitoring programs have been undertaken during previous geotechnical works (Archaeological Services 2012, 2013). A Heritage Assessment relating to the development has also been produced (Archaeological Services 2015).

The prehistoric period (up to AD 70)

- 4.2 There are no known prehistoric sites or recorded find spots within the immediate vicinity of the site. However, recovery of flint arrowheads in the wider vicinity is evidence for Neolithic and Bronze Age activity in the surrounding area.

The Roman period (AD 70 to 5th century)

- 4.3 The Maiden Way, a Roman road, and the Roman fort of Whitley Castle, are both located close to Alston, to the north-west of the site. It has been speculated that the fort was placed to oversee lead and silver mining in the vicinity but no evidence for Roman mining has been identified to date. There are no recorded sites or finds of Roman date within the immediate vicinity of the site.

The medieval period (5th century to 1540)

- 4.4 A medieval bastle is located at Whitely Shield Farmhouse c.1km north of Carrshield Lead Mine. There are no recorded sites or finds of medieval date within the immediate vicinity of the site.

The post-medieval period (1541 to 1899)

- 4.5 Exploitation of mineral resources in the north Pennines increased from the mid-16th century onward with lead mining becoming the main industry in the area by the 18th century. The miners often lived in smallholdings, farming marginal lands to supplement their income. One of the earliest surviving mines is Coalcleugh Lead Rake which dates from before 1690. The earliest known mine at Carrshield was a level started in 1760.

The modern period (1900 to present)

- 4.6 The mine continued into the 20th century, with the miners living at the site in a large lodging house. A second mine at the site, Scathole Mine, was operated in the 19th century by the Beaumont Company; it re-opened in the 1950s. As well as the mining remains there is evidence for at least two hushes. Other remains include a set of stone storage bunkers, known as bouse teams, and a washing floor for processing ores. The River West Allen runs through the centre of the mine complex. The river is revetted on both sides, with stone walls which once supported an extension of the washing floor. The mine and its surrounding area also include within it the remains of a railway line and several tracks giving access to the waste heaps, lagoons and settling ponds. The mine includes several listed buildings, including the adit portal of Barneycraig horse level. The lead mine was closed in 1981.

5. The archaeological monitoring

Introduction (Figure 2)

- 5.1 The works comprised the excavation of three 2m by 0.5m test pits using a 360° backhoe excavator fitted with a toothless ditching bucket, and the excavation of six

0.5m by 0.5m (maximum) hand excavated test pits under close archaeological supervision.

Machine-excavated test pits 1, 3 and 9

- 5.2 Mining waste [2] was identified at a depth of 0.1m below ground level in all three test pits and continued to a depth of 1.7m, where the excavations were stopped. Over this was a thin layer of topsoil [1: 0.1m deep]. Natural subsoil was not encountered in any of the test pits.

Hand-excavated Test Pit 1

- 5.3 The top of the Barneycraig Adit Culvert [F7] was exposed at a depth of 0.75m below ground level. The culvert was constructed of dry stone blocks forming an arch. The culvert was only partially exposed. Overlying the Adit Culvert was light grey brown re-deposited sandy clay gravel [6: 0.5m thick]. Overlying the gravel was topsoil [5].

Hand-excavated test pits 3, 4 and 5

- 5.4 A 20th-century cast iron drain pipe orientated north-east to south-west was exposed at a depth of between 0.2m and 0.4m below ground level (8). Overlying and surrounding the pipe was mining waste [4: 0.3m thick]. The mining waste was overlain by thin topsoil [3].

Hand-excavated test pits 6 to 7

- 5.5 Mining waste [4] was identified at a depth of 0.1m below ground level in each test pit, which continued to depths of 0.8-0.9m respectively, when excavations stopped. Overlying the mining waste was a thin layer of topsoil [3: 0.1m deep].
- 5.6 Natural subsoil was not encountered in any of the test pits.

6. The artefacts

- 6.1 No artefacts were recovered during the works.

7. The palaeoenvironmental evidence

- 7.1 No material suitable for palaeoenvironmental assessment was identified for sampling during the works.

8. Sources

Archaeological Services 2012 *West Allen Minewater Scheme, Northumberland: archaeological monitoring*. Unpublished report **3010**, Archaeological Services Durham University

Archaeological Services 2013 *West Allen Minewater Scheme, Northumberland: archaeological monitoring*. Unpublished report **3313**, Archaeological Services Durham University

Archaeological Services 2015 *Barneycraig Mine water Treatment Scheme, Carrshield Lead Mines and Ore Works, Northumberland: heritage assessment*. Unpublished report **3692**, Archaeological Services Durham University

Appendix 1: Data table

Table 1.1: Context data

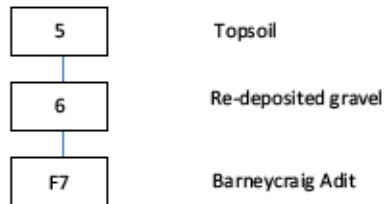
| No | Area | Description |
|----|--|--------------------------------|
| 1 | Machine-excavated test pits 1, 3 and 9 | Topsoil |
| 2 | Machine-excavated test pits 1, 3 and 9 | Mining Waste |
| 3 | Hand-excavated test pits 3-7 | Topsoil |
| 4 | Hand-excavated test pits 3-7 | Mining Waste |
| 5 | Hand-excavated Test Pit 1 | Topsoil |
| 6 | Hand-excavated Test Pit 1 | Re-deposited sandy clay gravel |
| F7 | Hand-excavated Test Pit 1 | Barneycraig Adit Culvert |
| 8 | Hand-excavated test pits 3-5 | Cast iron pipe |

Appendix 2: Stratigraphic matrices

Machine-excavated test pits 1, 3 and 9



Hand-excavated Test Pit 1



Hand-excavated test pits 6 and 7



Hand excavated test pits 3, 4 and 5

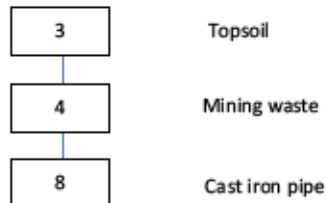
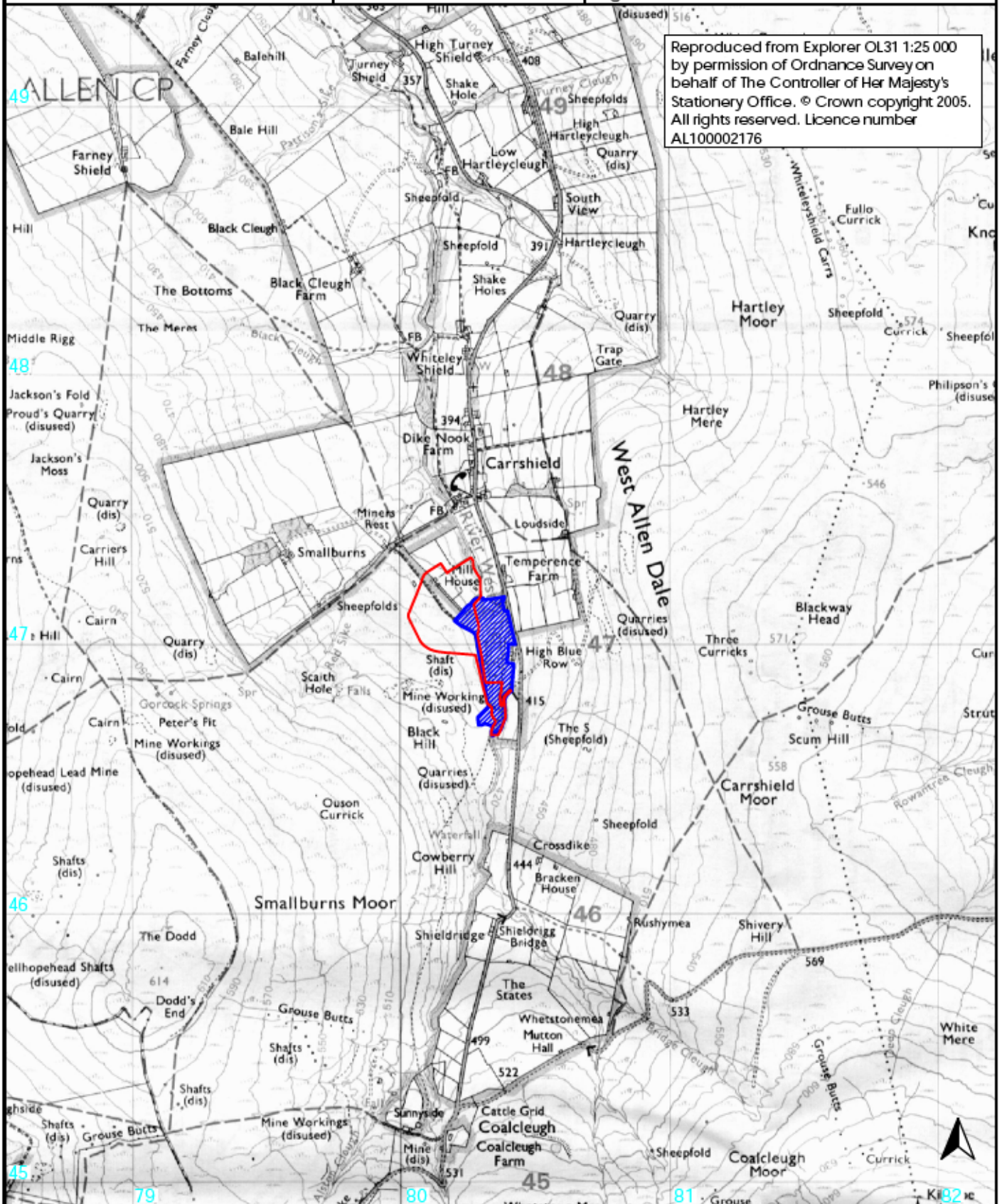




Figure 1: Site location



 ground investigation site boundary

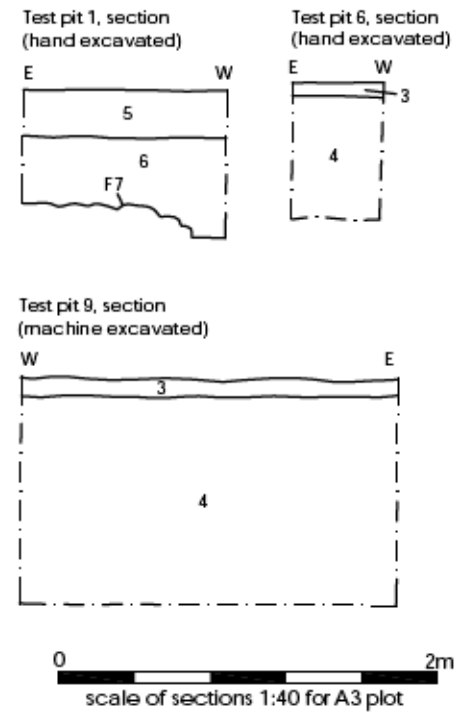
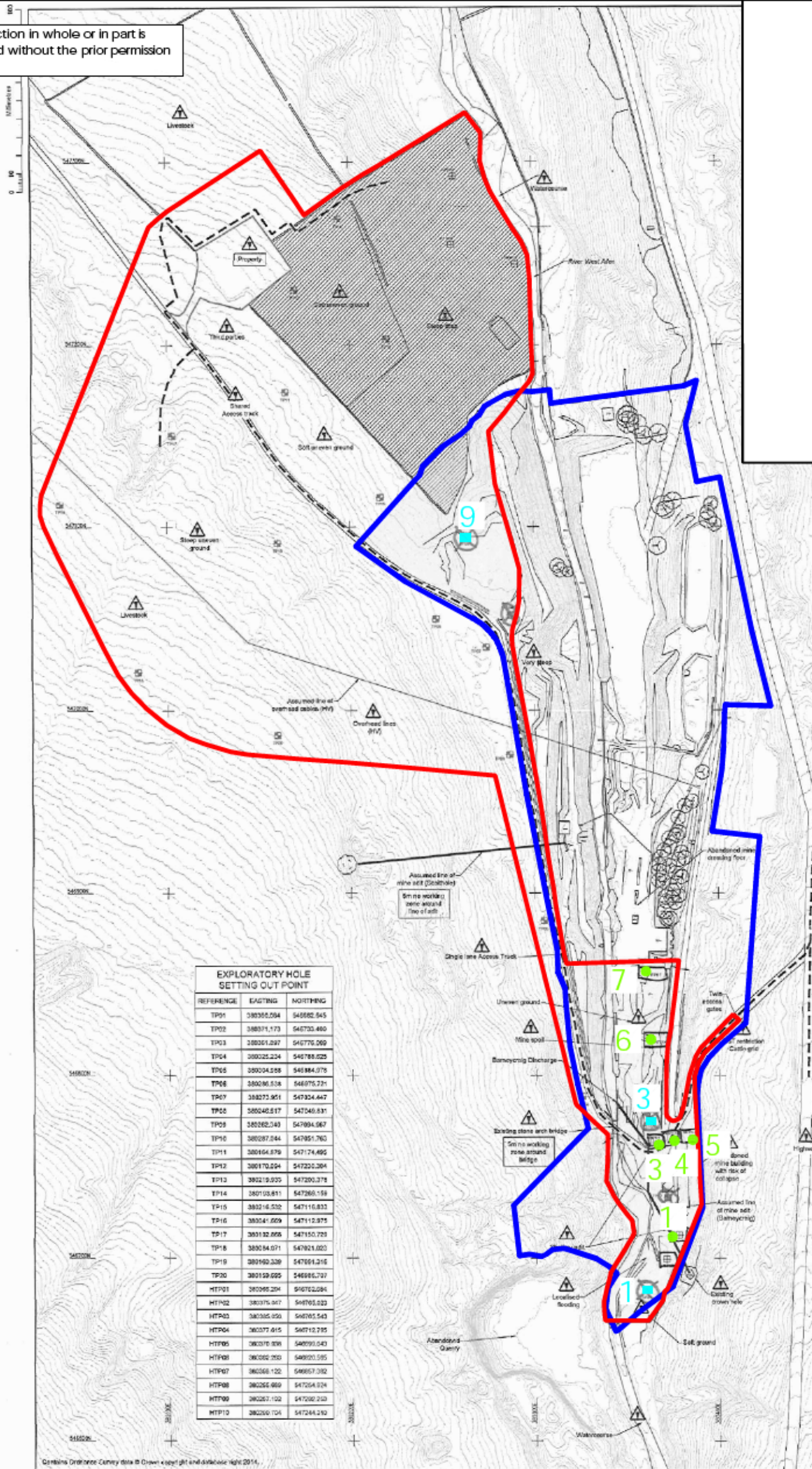
 scheduled ancient monument

0 1km

scale 1:20 000 for A4 plot

- ground investigation site boundary
- scheduled ancient monument
- machine excavated test pit
- hand excavated test pit

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| REFERENCE | EASTING | NORTHING |
|-----------|------------|------------|
| TP01 | 380365.094 | 546992.545 |
| TP02 | 380371.173 | 546733.490 |
| TP03 | 380361.297 | 546776.069 |
| TP04 | 380325.234 | 546788.028 |
| TP05 | 380304.258 | 546884.075 |
| TP06 | 380306.538 | 546975.721 |
| TP07 | 380273.951 | 547934.447 |
| TP08 | 380240.517 | 547049.831 |
| TP09 | 380282.343 | 547994.967 |
| TP10 | 380287.244 | 547951.760 |
| TP11 | 380454.878 | 547174.492 |
| TP12 | 380170.294 | 547202.204 |
| TP13 | 380219.935 | 547290.278 |
| TP14 | 380103.811 | 547260.159 |
| TP15 | 380216.532 | 547110.833 |
| TP16 | 380341.609 | 547112.975 |
| TP17 | 380132.856 | 547150.723 |
| TP18 | 380344.071 | 547821.020 |
| TP19 | 380190.328 | 547661.216 |
| TP20 | 380129.692 | 546986.737 |
| HTP01 | 380398.294 | 546762.284 |
| HTP02 | 380375.917 | 546765.022 |
| HTP03 | 380395.959 | 546765.543 |
| HTP04 | 380377.615 | 546712.795 |
| HTP05 | 380376.836 | 546993.043 |
| HTP06 | 380392.250 | 546920.595 |
| HTP07 | 380368.122 | 546857.392 |
| HTP08 | 380255.969 | 547264.924 |
| HTP09 | 380287.122 | 547290.230 |
| HTP10 | 380250.124 | 547244.210 |

- The contractor shall ensure all excavations comply with the relevant trackway (e.g. bog mats or ground guards) when building across soft or wet areas to ensure access to reach proposed exploratory hole locations.
- Key:**
- Ground Investigation Site boundary
 - Watercourse
 - Proposed temporary compound area
 - Tonette Area
 - Site access road
 - Assumed line of rail
 - Hazards
 - Hand dug test pit (x10) (1.2m max)
 - Machine dug test pit (x20) (2-4m or more)
 - Existing Trench
- Miscellaneous Hazards:**
- Poor phone reception
 - Remote Site
 - Adverse weather conditions

| Rev | Date | Description | By | Check | App'd |
|-----|----------|--|-----|-------|-------|
| A02 | 26/11/14 | Revised site boundary and Tonette Area | JSD | CH | JPD |

Drawing Title: **FOR INVESTIGATION WORKS** SO

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Client: **The Coal Authority**

Project Title: **BARNEYCRAIG MINE WATER TREATMENT SCHEME**

Drawing Title: **EXPLORATORY HOLE LOCATION PLAN (FEASIBILITY)**

| Scale | Design | Draw | Check | Author |
|--------|--------|------|-------|--------|
| 1:1000 | CH | JSD | CH | JPD |

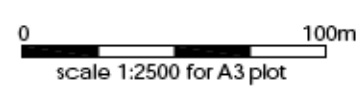
| Originator | Date | Issue | Date | Issue |
|------------|----------|----------|----------|----------|
| A1 | 19/12/14 | 15/12/14 | 15/12/14 | 15/12/14 |

Drawing Number: 5034762-ATK-BCR-DR-C-003 A02

C. Hargrave 18/02/15

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Figure 2: Test pit location



Figure 3: Machine-excavated Test Pit 1, looking north-east



Figure 4: Machine-excavated Test Pit 3, looking north-east



Figure 5: Machine-excavated Test Pit 9, looking south-west



Figure 6: Hand-excavated Test Pit 1, showing Barneycraig Adit Culvert, looking south



Figure 7: Hand-excavated Test Pit 3, looking east



Figure 8: Hand-excavated Test Pit 4, looking east



Figure 9: Hand-excavated Test Pit 5, looking east



Figure 10: Hand-excavated Test Pit 7, looking north