NAA

ARCHAEOLOGICAL SURVEY AND MONITORING REPORT

CRACOE TO RYLSTONE PIPELINE SCHEME, CRAVEN NORTH YORKSHIRE

prepared for

Morrison Utilities

on behalf of

Yorkshire Water

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Grid Ref — SD 9678 5872

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1.0 INTRODUCTION

1.1 This report presents the results of a topographic earthwork survey and archaeological monitoring undertaken as part of the construction of a new water pipeline between Cracoe and Rylstone in Craven District, North Yorkshire (NGR SD 9670 5866 to SD 9721 5883; Fig. 1). A desk-based appraisal of the scheme, in conjunction with a programme of evaluation of the site by geophysical survey, indicated that most of the pipeline route was of limited archaeological potential. Following discussions with the Senior Historic Environment Officer at the Yorkshire Dales National Park Authority, it was agreed that the impact of the construction scheme would be adequately mitigated by an earthwork survey and a programme of archaeological monitoring on land to the north of the west end of Rylstone village (Figs 2 and 3).

1.2 This report has been produced by Northern Archaeological Associates (NAA) for Morrison Utilities ('the client') on behalf of Yorkshire Water.

2.0 LOCATION, TOPOGRAPHY AND GEOLOGY

2.1 The scheme was located in a valley in the southern part of the Yorkshire Dales National Park. The earthwork survey and archaeological monitoring was undertaken to the north of the west end of Rylstone village centred on SD 9678 5872 (Fig. 2), where the pipeline crossed the southern edge of a field to the rear of the modern street frontage. The work area sloped gradually up from c.190m above Ordnance Datum (aOD) at the west end of Rylstone to c.200m aOD centrally within the village and upon Long Lane, which bisects the settlement north to south. The field was under pasture.

2.2 The bedrock geology consists of limestone of various formations, overlain by superficial deposits of Devensian Till (BGS 2021). The soils are mapped as Brickfield 3 Association, consisting of loamy and clayey surface-water gley soils (Soil Survey of England and Wales 1983; Jarvis *et al*. 1984, 123).

3.0 SUMMARY ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 This section summarises relevant results from the archaeological appraisal of the pipeline route (NAA 2020a) and a geophysical survey (NAA 2020b).

3.2 Evidence of prehistoric or Roman activity within the environs of the scheme is limited to isolated finds including a Bronze Age perforated hammerstone and socketed axe, and a Roman coin in Cracoe.

3.3 Although Rylstone is suggested to have early medieval origins, there is an absence of recorded early medieval features in the direct hinterland of the village. Therefore, there was low potential for features of this date to be encountered during the work.

3.4 According to the Yorkshire Dales National Park Historic Environment Record (HER), the settlement at Rylstone was first documented following the Norman Conquest when William I granted the surrounding land to the Norman baron Robert de Romille. From the 15th century until the mid-16th century, Rylstone was at the centre of the Norton family estate and would have formed a high-status late medieval settlement. Following the family's decline, the estate was sold at the beginning of the 17th century and several of the high-status buildings fell out of use then quarried for stone. Material relating to these structures can be seen in several post-medieval buildings in the village and earthworks relating to former buildings. There is a large number of medieval earthworks in the rural lands of the surrounding area. Many post-medieval buildings in Rylstone are Grade II Listed. These are mainly farmhouses and associated auxiliary farm buildings or residential buildings, many dating to the 18th century.

Geophysical survey

3.5 A geophysical survey of five parts of the pipeline route was undertaken in August 2020 (NAA 2020b). Three areas located towards the north-eastern end of the scheme produced largely negative results. However, more significant results were recorded in two fields located immediately to the north of Rylstone, which consequently became the focus of archaeological works (Fig. 2).

3.6 The western survey area recorded several rectilinear anomalies considered indicative of medieval settlement. These were associated with anomalies that could denote buried structural and occupation deposits, sunken lanes or hollow ways; parallel linear anomalies might have been ditches associated with a track or road serving as a back lane to the village during the medieval period.

3.7 Some linear anomalies at the northern edge of the survey area were possibly agricultural in origin, denoting former enclosures, field boundaries or a headland between different medieval cultivation regimes. Several alignments of regularly spaced linear anomalies

with a broad spacing were consistent with former ridge and furrow ploughing. Other weak linear anomalies corresponded with the location of former field boundaries recorded on the First Edition 1853 Ordnance Survey map.

3.8 The eastern geophysical survey area recorded anomalies consistent with the north-eastern corner of a ditched enclosure. A zone of magnetic disturbance flanking both sides of this enclosure may be of archaeological origin, perhaps representing an infilled feature or related to a build-up of magnetic debris. Several faint trends within the enclosure could be associated with archaeological deposits.

3.9 To the east of the enclosure, linear trends displayed patterning and forms suggestive of agricultural activity. Regularly spaced linear anomalies running from west-southwest to east-northeast were likely to denote ridge and furrow cultivation, while others running from north-northwest to south-southeast were either indicative of ridge and furrow or a headland.

3.10 No trenches were excavated in the eastern geophysical survey area during the pipeline scheme; therefore, the features were not impacted upon by the development.

4.0 AIMS AND OBJECTIVES

4.1 The main aim of the archaeological work was to investigate and record any archaeological remains that may be adversely impacted by construction of the development. The primary objectives were to:

- create a detailed record of the archaeological remains that may be present within the area of the development in advance of their loss through the proposed works;
- recover and assess any associated structural, artefactual and environmental evidence;
- carry out post-excavation analysis, to make the results of the archaeological works accessible via an illustrated report and, if appropriate, to undertake further analysis and publish the results in a local, regional or national journal;
- deposit the results of the work with the Yorkshire Dales National Park Authority HER, the museum receiving the project archive and the Archaeology Data Service; and
- undertake a scheme of work that meets national and regional standards (Historic England 2015; South Yorkshire Archaeology Service 2018).

5.0 METHODOLOGY

Earthwork survey

5.1 The earthwork survey was undertaken using a Topcon network RTK DGPS system base station and rover. The top and bottom breaks of slope of each feature were recorded as layered 3D break lines, along with any other pertinent topographical or reference information. The resulting survey map was printed, and hand hachured on site at a scale of 1:500.

5.2 Accuracy levels were maintained in accordance with Historic England guidelines (Historic England 2017). The site was surveyed using the Ordnance Survey grid and all heights were tied into the OS Newlyn datum.

5.3 Files were imported into AutoCAD software and the features drawn up on a hachured earthwork plan. The AutoCAD survey drawings were produced with structured layer control according to HE guidelines. Full digital data (DWG and DXF formats) will be provided with the site archive.

Archaeological monitoring

5.4 A total of 13 trenches (including 1 launch pit) were excavated to facilitate horizontal directional drilling of the new water pipeline causing minimal impact upon the extant archaeological remains.

5.5 Within the trenches, stripping of overburden (topsoil and subsoil) was carried out by 3.5 tonne back-acting mechanical excavator fitted with a toothless or ditching bucket under direct archaeological supervision.

5.6 Overburden was removed down to natural subsoil deposits in the first instance, to allow the monitoring archaeologist to assess for the presence or absence of archaeological remains. The trench was then excavated to full depth as determined by the needs of construction.

6.0 RESULTS

Earthwork survey

6.1 The following section describes the results of the earthwork survey as illustrated on Figure 3. The upstanding features are summarised in Table 1.

Table 1: Summary of earthworks recorded during the topographic survey.

Feature no.	Description	Period
1	Remains of dry-stone wall. Tree growing over the western end.	Post-Medieval
2	Narrow sunken trackway leading from existing gate to the south. Low bank located on the west side.	Post-Medieval
3	Gentle sloped trackway present in terrace edge. Revetment wall **4** visible at southern end.	Unknown
4	Remains of a possible revetment wall possibly associated with terrace.	Unknown
5	Low mound next to modern concrete installation.	Post-medieval?
6	Extensive north-south hollow way. No visible banks.	Medieval?
7	West-east hollow way flanked by banks on both sides. The hollow way was more difficult to discern to the east end. The feature may have represented a back lane.	Medieval?
8	North-south hollow way which ties-in to hollow way **7**. Has low banks on both sides. The feature becomes imperceptible at its north end, possibly damaged by railway construction.	Medieval?
9	Roughly rectangular enclosure defined by banks to the north and east. No internal features are visible.	Medieval?
10	Rectangular enclosure defined by banks to the west, north and east. No visible entrance. West bank is very low with north and east banks better preserved. Sub-divided by bank **11**.	Medieval?
11	Low east-west bank sub-dividing enclosure **10**.	Medieval?
12	Shallow hollow way extending to the south from hollow way **7**. Flanked by low banks to the east and west.	Medieval?
13	Roughly circular depression within south end of hollow way **12**.	Medieval?
14	Narrow enclosure with possible entrance to the north. Defined by low banks to the west and east. More fragmented northern boundary.	Medieval?
15	Roughly rectangular enclosure or raised platform with very low west and north banks. Hollow way **7** appears to connect to the platform at its north-west corner. Area cattle trampled.	Medieval?
16	Low bank defining the north end of enclosures **14** and **15**.	Medieval?
17	Bank flanking the north side of hollow way **7** that returns to the north and defines the east side of hollow way **8**.	Medieval?
18	A bank delimiting the northern end of enclosures **9** and **10**, returns to the south at its east end as bank **19.**	Medieval?
19	Continuation of bank **18** to the south, where it defines the west side of hollow way **12**.	Medieval?
20	Slight bank forming a boundary between enclosures **9** and **10**.	Medieval?
21	Bank flanking the north side of hollow way **7** that return to the north and defines the west side of hollow way **8**.	Medieval?
22	Brick-lined culvert.	Post-medieval
23	Low bank flanking the east side of hollow way **12**. Slight returns to the east at its north end.	Medieval?
24	Possible bank separating enclosure **14** from enclosure **15**.	Medieval?
25	A terrace towards the east side of the survey area.	Natural?
26	Second terrace towards the east side of the survey area.	Natural?

6.2 The earthwork survey recorded a group of features within the eastern part of the area, most of which most likely resulted from post-medieval or later activity. A more complex suite of earthworks associated with the medieval village were recorded to the west. These included enclosures, hollow ways and larger fields of ridge and furrow cultivation, which represented the rear of settlement plots that fronted the main road through the village, which is currently located c.75m to the south (Fig. 2).

6.3 The remains of a dry-stone wall (**1**) were present at the eastern end of the investigation area. The wall had suffered considerable damage caused by the movement of modern farm vehicles. It survived as a slight earthwork up to 1.7m wide (Plate 1). The wall was located to the south of an existing gate and extended from the eastern field boundary westwards for c.11m. It was most likely of post-medieval origin.

6.4 A shallow trackway (**2**) was located to the south of wall **1**. The trackway ran north-northeast to south-southwest and crossed a natural terrace (**26**; Plate 2). The trackway was c.20m long and extended diagonally southwards down the terrace slope. It had a low bank along the western edge. A lower terrace (**25**) was located c.20m to the west of terrace **26**, which was aligned parallel.

6.5 A shallow trackway (**3**) was located at the south-east corner of the survey area. The trackway was c.10m long and 1.5m wide and was aligned broadly north to south. It traversed an uphill slope, which may have represented the edge of another terrace above terrace **26** (Plate 3).

6.6 A single course of large stones in the south-eastern corner of the survey area may represent the upper course of a revetment wall (**4**; Plate 4). The visible remains of the wall were 0.4m wide. They extended northwards from the southern field boundary for c.2m.

6.7 A discrete mound (**5**) was located 35m to the west of the possible revetment wall (**4**), which was situated adjacent to the southern field boundary wall. The mound was 3m in diameter and c.0.6m high. It could conceivably represent a heavily vegetated cairn. However, a large subsurface structure with concrete lid was located c.3m to the east of the mound, and it seems most likely that it represented upcast from the installation of this feature.

6.8 The south-western zone of the investigation area included a more complex suite of earthworks relative to those recorded to the east. This area contained an east-west

hollow way (**7**), which defined the northern edge of four small, enclosed areas (**9**, **10**, **14** and **15**) that probably represented the rear of settlement plots, which fronted the main road to the south. The area to the north of hollow way **7** contained two larger fields.

6.9 Hollow way **7** was one of the most dominant earthworks in the survey area. It most likely served as a back lane within the medieval village. The hollow way survived as a large east-west feature that was up to 5m wide and c.65m long, and was flanked to the south by a slight bank (**18**). The bank defined hollow way **7** from enclosures **9** and **10**. Hollow way **7** was flanked to the north by banks **21** and **17**.

6.10 The visible extent of enclosure **9** was 38m wide by up to 55m long. It was defined to the east by bank **20** which, although in poor condition, had clearly formed the boundary between enclosures **9** and **10**. Enclosure **10** was rectangular and measured 33m wide by over 27m long and had been sub-divided internally by bank **11**. Bank **11** was 22m long by 3m wide. Enclosure **10** was defined to the east by bank **19**, which represented a southern return of the east end of bank **18**.

6.11 Hollow way **12** was located immediately to the east of enclosure **10**. It was orientated south to north and was up to 7m wide by 27m long. Hollow way **12** intersected with hollow way **7** at its north end and would therefore have provided access from the street front into the agricultural lands located to the rear of the settlement. Hollow way **12** was defined to the east by a low bank **23**, which delineated the western and northern extent of enclosure **14**.

6.12 A semi-circular hollow of unknown function was recorded at the south end of hollow way **12**. It was c.4m in diameter and may have represented the remains of later, perhaps post-medieval activity.

6.13 Enclosure **14** was 27m by 7m in size. It was delineated from enclosure **15** by another possible bank (**24**) and may have had an entrance to the north. Enclosure **15** was 10m by 13m in area, and it may have represented a platform or terrace that was raised slightly above enclosure **14**. Both enclosures **14** and **15** were defined to the north by a low bank (**16**), which suggested they also represent the rear of settlement plots.

6.14 The land to the north of hollow way **7** was occupied by the remains of a single field, which contained evidence for ridge and furrow cultivation that aligned with the settlement and network of hollo ways. The field was defined to the west by another

hollow way (**8**), which intersected with hollow way **7** at its south end. Hollow way **8** was 3m wide by 22m long and was aligned north-northwest to south-southeast. It was flanked by low banks. A second, parallel hollow way (**6**) was located 70m to the east, which defined the western side of another field of upstanding ridge and furrow. Hollow way **6** was 3.5–4m wide and was c.140m long. It became imperceptible at its south end, which was most likely due to erosion of the earthwork by modern farm activities. Hollow ways **8** and **6** presumably served to define the extent of fields, whilst providing access to more distant farmland.

6.15 The remains of ridge and furrow cultivation across the northern part of the survey area was aligned north-northwest to south-southeast. The ridge centre points were spaced between 7m and 10m apart.

6.16 The entrance to a brick-lined culvert (**22**) was recorded just beyond the edge of the survey area to the south-west. The culvert ran beneath the survey area with a north-west to south-east alignment. Construction of the culvert was probably undertaken in conjunction with construction of the railway line, which defined the western site boundary.

Archaeological monitoring

6.17 Archaeological monitoring during the excavation of 13 trenches was undertaken following completion of the earthwork survey detailed above. The trenches were generally located to the south of the proposed route of the pipeline (Fig. 2a and Table 2).

Table 2: Trench summary

Trench	Dimensions	Notes
Launch pit	2m x 2m x 1.5m	
Trench 1	1m x 2.5m x 1.60m	
Trench 2	1m x 1m x 1.2m	
Trench 3	0.60m x 1m x 0.70m	
Trench 4	1.5m x 1m x 1m	Topsoil contained modern ceramic building material, tarmac and plastic. None of which was retained
Trench 5	1m x 1.5m x 1.2m	
Trench 6	1m x 1.5m x 1m	
Trench 7	0.80m x 1m x 1m	
Trench 8	1m x 1m x 1m	
Trench 9	1m x 1.5m x 1.2m	
Trench 10	1m x 1.5m x 1.3m	
Trench 11	1m x 1.5m x 1.2m	
Trench 12	1m x 1.5m x 1.2m	

6.18 No archaeological features, deposits or finds were recognisable in any of the limited areas of excavation, other than the presence of a subsoil within each of the trenches. The natural boulder clay was exposed in each trench, which was sealed by a light brown silt subsoil that ranged from 0.1m–0.4m thick (Plate 10). This deposit had probably accumulated during medieval and post-medieval ploughing of the fields and enclosures recorded by the earthwork survey, and probably represented the fill of plough furrows. However, no artefactual material was recovered to indicate a date for this activity. The subsoil was sealed by up to 0.3m of dark brown topsoil.

7.0 DISCUSSION

7.1 The earthwork survey undertaken as part of the scheme recorded enclosures, hollow ways and larger fields of ridge and furrow cultivation, all of which survived as slight upstanding features. These enclosures most likely represented the rear of settlement plots that fronted the main road through the village, which is currently located c.75m to the south (Fig. 2). The northern edge of the enclosures was delimited by a large east to west hollow way (7) that most likely represented the remains of a back lane to the medieval village. Beyond the back lane were the remains of further hollow ways, which would have provided access to more distant farmland whilst serving as boundaries defined larger fields. Several terraces and indistinct trackways were recorded towards the east end of the survey area, although these may have been derived from post-medieval use of the area.

7.2 The results of the archaeological monitoring of excavations associated with pipeline construction were largely negative, most likely due to the limited size of the trenches; however, the presence of a thick deposit of subsoil filling plough furrows may perhaps confirm the agricultural use of the area during the medieval period. No chronologically diagnostic medieval or earlier artefactual material was recovered during the ground works, although considering the known history of the village of Rylstone, and the form of the upstanding earthworks, it can be presumed that most of the features represent the remains of the north edge of the medieval village, and the edge of farmland situated to the north.

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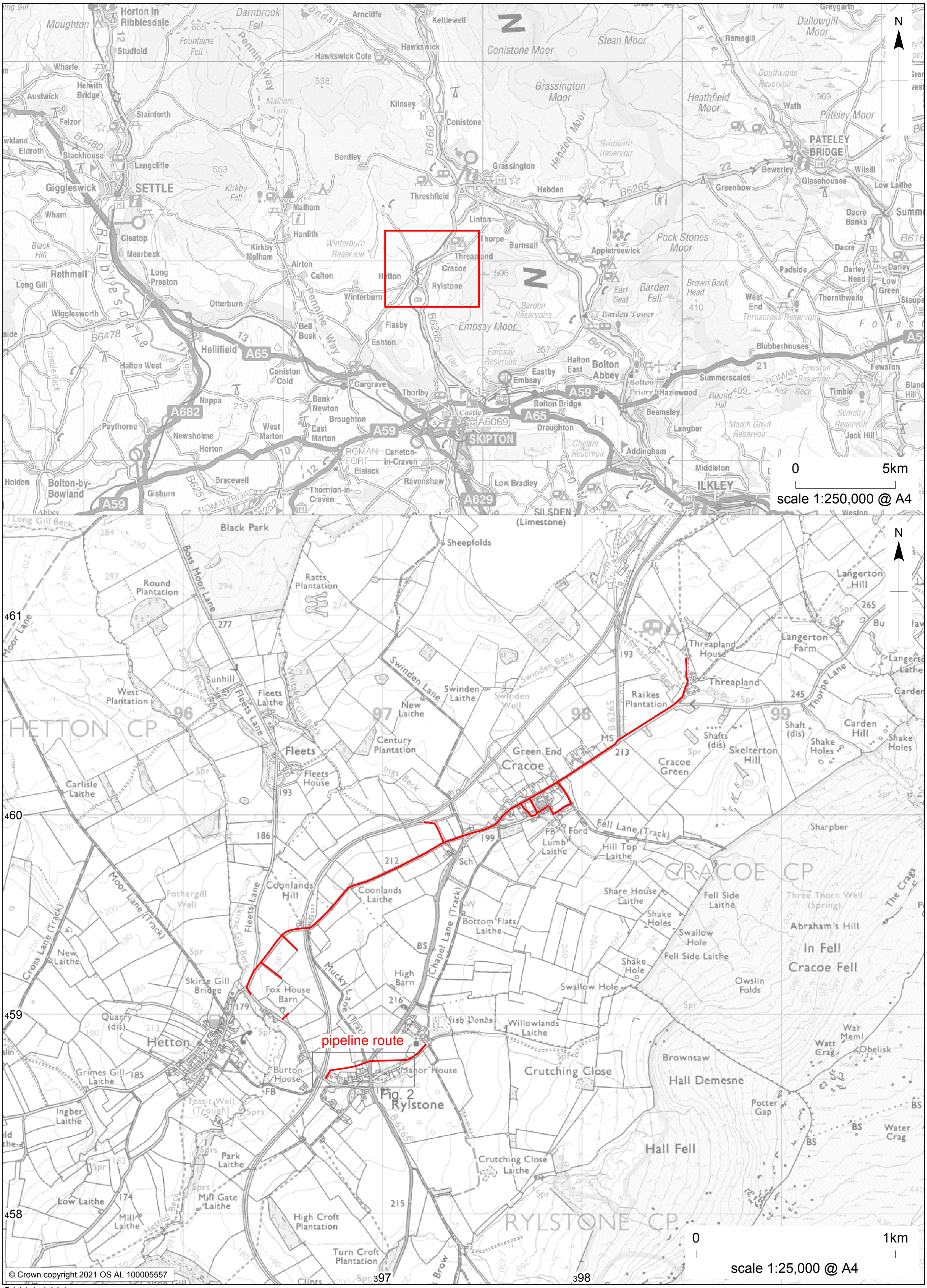
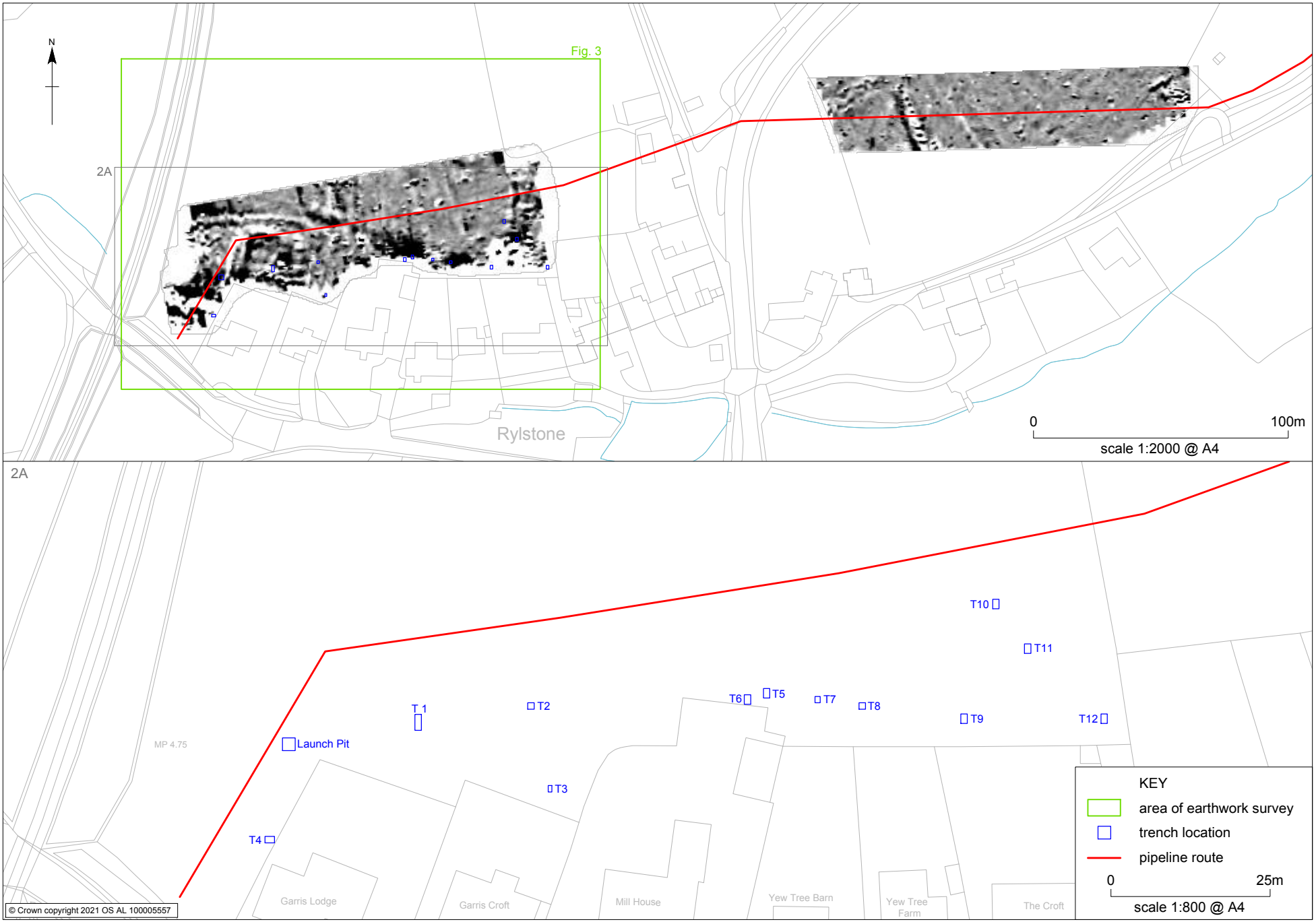


Cracoe to Rylstone Pipeline Scheme: site location

Figure 1



Cracoe to Rylstone Pipeline Scheme: trench locations and earthwork survey area

Figure 2

Cracoe to Rylestone Pipeline Scheme: earthwork survey results

Figure 3

Plate 1

Cracoe to Rylstone Pipeline Scheme: remains of dry-stone wall 1, looking west

Plate 2

Cracoe to Rylstone Pipeline Scheme: shallow trackway 2, looking south-south-west

Plate 3

Cracoe to Rylstone Pipeline Scheme: trackway 3 running south and up slope of terrace

Plate 4

Cracoe to Rylstone Pipeline Scheme: possible revetment wall 4, looking east

Cracoe to Rylstone Pipeline Scheme: mound 5, looking south. Concrete lid visible to the left of the frame

Plate 5

Cracoe to Rylstone Pipeline Scheme: hollow way 6, looking north

Plate 6

Plate 7

Cracoe to Rylstone Pipeline Scheme: Field 14, looking north. Platform 15 to the right

Plate 8

Cracoe to Rylstone Pipeline Scheme: hollow way 8, looking south to hollow way 7. Enclosures 9 and 10 visible in the background

Plate 9

Cracoe to Rylstone Pipeline Scheme: western entrance to culvert 22

Plate 10

Cracoe to Rylstone Pipeline Scheme: the Launch Pit, excavated to the upper level of the natural boulder clay