ARCHAEOLOGICAL SERVICES WYAS

Newthorpe Quarry
Newthorpe
North Yorkshire

Archaeological Investigation

Report No. 1590

October 2006

CLIENT

Darrington Quarries

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Summary

An archaeological investigation at Newthorpe Quarry, was undertaken in order to evaluate the presence of possible archaeological features in an area where topsoil and subsoil had been previously removed without any archaeological supervision. The remains of a linear ditch possibly associated with a previously recorded enclosure was the only positive archaeological feature found on the site, although several anomalies of natural origin were also encountered. A cattle bone from the upper fill of the one confirmed ditch suggests activity in the Late Iron Age or Roman period.

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Archaeological Services WYAS

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1. Introduction

1.1 Archaeological Services WYAS were commissioned by Bob Binstead of Darrington Quarries Limited to undertake an archaeological investigation at Newthorpe Quarry, Newthorpe, North Yorkshire (Fig. 1). Although not currently active the quarry saw a small extension to its western edge in 2000. Retrospectively it was realised that this extension had encroached into the eastern extremity of a linear settlement site that lies between the quarry and Castle Hills to the west. The settlement is of unknown date and was previously identified by air photography and geophysical survey. The archaeological work was carried out in order to salvage any surviving archaeological evidence associated with the elements of the settlement that continued into the quarry extension area. The investigation was centred on SE 4570 3240 (Figs 1 and 2) and took place between the 1st and 12th of June 2006.

2. Archaeological Background

2.1 The cropmark and geophysical data in Highfield, between Newthorpe Quarry and the wood at Castle Hills (north of Highfield Lane), present a linear succession of sub-rectangular and sub-circular enclosures (up to 50m wide), some superimposed and some appended to east-west linear ditches. The site gives the impression of a multi-phased or migrating settlement with a central sinuous linear feature that corresponds with the earthwork of a hollow-way/track within the area of Castle Hills (see McNaught 1998). The site is very similar to enclosure patterns recorded at Dalton Parlours, Compton and Wattle Syke, Collingham, both of which date to the Late Iron Age/Roman period (Yarwood 1990, 273; Webb 2004). Within the wood, as well as the track, there is one complete rectangular enclosure preserved as an extant earthwork and elements of others, which are all probably part of the linear settlement in Highfield (McNaught1998).

2.2 A notable archaeological site was investigated just 0.5km to the south-west of the quarry during the upgrading of the A1 in 2003. Here was found an enclosure containing some 300 Iron Age pits, eight of which were found to contain human burials (OAN forthcoming).

3. Aims, Objectives and Methods

3.1 The topsoil of the quarry extension had already been removed to form the perimeter bund, but in places some subsoil still appeared to remain in June 2006. The initial aim was to mechanically re-strip selected areas of the site under archaeological supervision to see if some of the expected deeper linear archaeological features were preserved in truncated fashion in the limestone bedrock. The work concentrated on the northern part of the quarry extension, being the area that the projected linear settlement would have occupied. Work in the south and central parts of the site was avoided because of the dangers associated with the vertical quarry face in these areas. The section faces and margins on the western and northern sides of the northern extension area, in the area where the ploughsoil remained intact, were also freshly stripped mechanically and then manually cleaned and inspected for archaeological features. The main aims of the investigation were to:

- determine the presence/absence, extent, condition, character, quality and date of any archaeological remains which may have remained within the quarry extension area;
- test the interpretations of anomalies identified by the geophysical survey;
- determine the significance of any archaeological remains present.

3.1 In order to meet the primary aims stated above, two areas of respectively 2m by 150m (north to south) and 2m by 30m (east to west) located against the bank of the north and west quarry boundaries. These areas were mechanically re-stripped in order to recreate two running sections, where potential archaeology could be identified. Addition a narrow strip (c.1m) of preserved ploughsoil adjacent to the bund was mechanically stripped down to the first archaeological horizon or natural in order that some assessment of the un-truncated features may be made (Figs 3 and 4).

3.2 The area was investigated by using a JCB excavator fitted with a 1.5m toothless ditching bucket, and later surveyed using a Trimble Geodimeter total station.

3.3 A written record was maintained of all archaeological features and finds encountered according to the ASWYAS standard method (ASWYAS 2005). Measured plans were at scales of 1:50 as appropriate. Measured feature sections were also drawn at scales of 1:10, 1:20 and 1:50, as appropriate. All sections, plans and elevations included spot-heights related to Ordnance Datum in metres as correct to two decimal places. Survey tie-in information was undertaken during the course of the evaluation and fixed in relation to nearby permanent structures and roads and to the National Grid. A photographic record was also made.

3.4 A sufficient sample (usually 50%) was excavated from cut features and other archaeological deposits to fulfil the aims of the work. A number of features were tested, in order to prove whether they were of anthropogenic or natural origin. Features were recorded using the single-context method.

4. Results

4.1 Nothing was revealed in the areas previously stripped during the quarry extension and it appears that much of the archaeology was contained within the thick subsoil. In the areas of new stripping adjacent to the bund the topsoil/ploughsoil and subsoil were removed in spits by a machine. The topsoil consisted of dark brown silts loam (1000) ranging in depth from 0.3m to 0.4m. Below the topsoil a deposit of mid-orange brown silty sand (1001) was identified as subsoil, ranging in depth from 0.1m to 0.3m.

4.2 The removal of the overburden deposits along the western edge revealed a large numbers of east-west linear anomalies in the surface and section of the natural limestone (Figs 3 and 4; Photo 1). One of these linear anomalies (Ditch 1017), located *c.*30m south from the north-west corner of the investigated area, can be equated with a sub-square enclosure identified by the geophysical survey in 1998 (McNaught 1998, enclosure 18). This U-shaped ditch measured 1.4m in width and 0.65m in depth, and was filled by two distinct

deposits. The upper fill (1015) consisted of mid orange brown sandy silt which contained few fragmented animal bones. Beneath this was a primary deposit of mid yellow brown silty sand mixed with sporadic small limestone fragments (1016). No artefacts were recovered during the excavation of this deposit (Figs 4 and 5, S.5; Photo 2).

4.3 Eight further linear anomalies were identified from the north-south and east-west sections, however, only one (1003) had any potential as an archaeological feature (Figs 5, 6 and 7). Gully 1003, located near the north-west corner of the investigated area, was observed to be of a shallow U-shaped profile measuring 0.34m in depth and 0.72m in width. It was filled by a single reddish brown sandy silt deposit (1002). It remains possible that this feature was a plough mark (Figs 4 and 5, S.1).

4.4 Linear feature 1014, which measured c. 0.28m in width and was excavated to a depth of about 0.45m, was observed to be filled by a light brown silty sand and was most likely a geological fissure (Figs 4 and 5, S.4).

4.5 All the others linear anomalies (1008, 1012, 1021, 1023, 1028 and 1030) were seen to have an irregular profile, and where all filled by deposits which were identified as redeposit natural of silty nature, possibly formed by weathering (Fig. 4; Fig. 5, S.2, 3, 6; Fig. 6, S.7, 11, 12).

4.6 The sections recorded along the northern side of the quarry extension (Fig. 4, S.15 and S17) revealed little but disturbed ground overlying the natural limestone.

4.7 Anomaly 1032, identified and recorded at the eastern end of the northern section face (Figs 3 and 4, S.17), appeared to have a double U-shaped profile (possibly representing a re-cut), both of which were in-filled by a material very similar if not identical to the subsoil. This anomaly is most likely of natural origin.

5. Artefact Record

5.1 No artefacts were recovered during the investigation. Three soil samples from the investigation (see Appendix 4) were wet sieved but produced no artefactual or environmental evidence to supplement the two bone fragments recovered from the upper fill of ditch 1017 (below).

6. Environmental Record

Animal Bone

6.1 Only two animal bone fragments were recovered from the investigation, both from the secondary fill (1015) of the enclosure ditch 1017. The bones are a cattle tibia shaft fragment and a cattle second phalanx.

Radiocarbon Dating

6.2 The cattle tibia shaft from context 1015, described above, was submitted for radiocarbon dating at the Scottish Universities Environmental Research Centre (Laboratory Code SUERC-11485 (GU-14441)).

6.3 The Radiocarbon Age was determined to be 1945 ± 35 years BP, that is conventional years BP (before 1950 AD). The ratio of delta ^{13}C relative to VPDB was measured at –21.0‰. The calibrated age ranges, determined from the University of Oxford Radiocarbon Accelerator Unit calibration programme (OxCal3) give the following date range probabilities:

- AD 15 - 85 (63.6%)
- 40 BC - AD 130 (95.4%)

7. Discussion

7.1 The investigation was concentrated in the northern part of the quarry extension, in the area most likely to contain remains of the linear settlement, the most detailed attention being paid to the section faces around the north-western angle.

7.2 Any archaeology that had lain within the area of the extension had been removed by the topsoil and subsoil stripping at that time. It should be noted for future reference that for the most part this strip had not been excessive and had only removed material to the surface of the limestone. This, however, would have been sufficient to remove any shallow archaeological features.

7.3 Of the nine potential linear archaeological features investigated only one (1017) displays traits that suggest it is man-made, the profiles and fills of the remainder being more consistent with natural features. Ditch 1017 corresponds exactly with the northern side of Enclosure 28 identified in the geophysical survey (McNaught 1998). Immediately to the north of this the geophysical data indicated a broad, less well defined meandering anomaly (McNaught's feature 1) that is interpreted as a trackway. It is conceivable that the general disturbance found to the north ditch 1017, including features 1021, 1023, 1028 and 1030, could be as a consequence of such a use and possibly represent the consequent rutting and churning of deposits. McNaught could not identify any definite features to the north of this in the geophysical data and this is

essentially borne out by the lack of definite archaeological features in the section faces in this area of the site.

7.4 The absence of artefactual evidence would too support the interpretation that the majority of the features investigated were natural in origin, although a scarcity of finds is not unusual for rural sites in this region (e.g Roberts *et al.* 2001). The animal bones from ditch 1017 are too few to be used constructively in interpreting the site, but the derived radiocarbon analysis provides a date of between 40 BC and AD 130. This might suggest that the settlement dates to the Late Iron Age or Roman period, perhaps with greater leanings to the Iron Age, although it should be appreciated that the bone, in the upper fill of the ditch, is almost certainly residual and may have found its way into the fill of a later ditch.

8. Conclusions

8.1 The archaeological investigations have established that the ploughsoil and subsoil stripping for the quarry extension in 2000 would have removed any shallow archaeological remains that had survived in that area, specifically those associated with the eastern half of an enclosure identified by geophysical survey in 1998.

8.2 Excavations around the perimeter of the site, where the ploughsoil was still intact allowed the identification of a number of potential features, but only Ditch 1017 is definitely archaeological in nature. This ditch may be equated with the north side of an enclosure plotted by geophysical survey in 1998 (Enclosure 18) and observed disturbance to the north of it may be equated with a trackway that ran through the centre of the supposed linear settlement to the west.

8.3 Although no diagnostic artefacts were recovered, radiocarbon dating of a cattle bone from the upper fill of Ditch 1017 suggests Late Iron Age or Roman period activity.

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Acknowledgements

Project Management
I. Roberts BSc FSA MIFA

Report
Luigi Signorelli MA
I. Roberts

Graphics/illustrations
L. Signorelli
M. Chisnall

Fieldwork
L. Signorelli
I. McIntyre

Specialists
J. Richardson PhD (Animal bone)
SUERC (Radiocarbon dating)

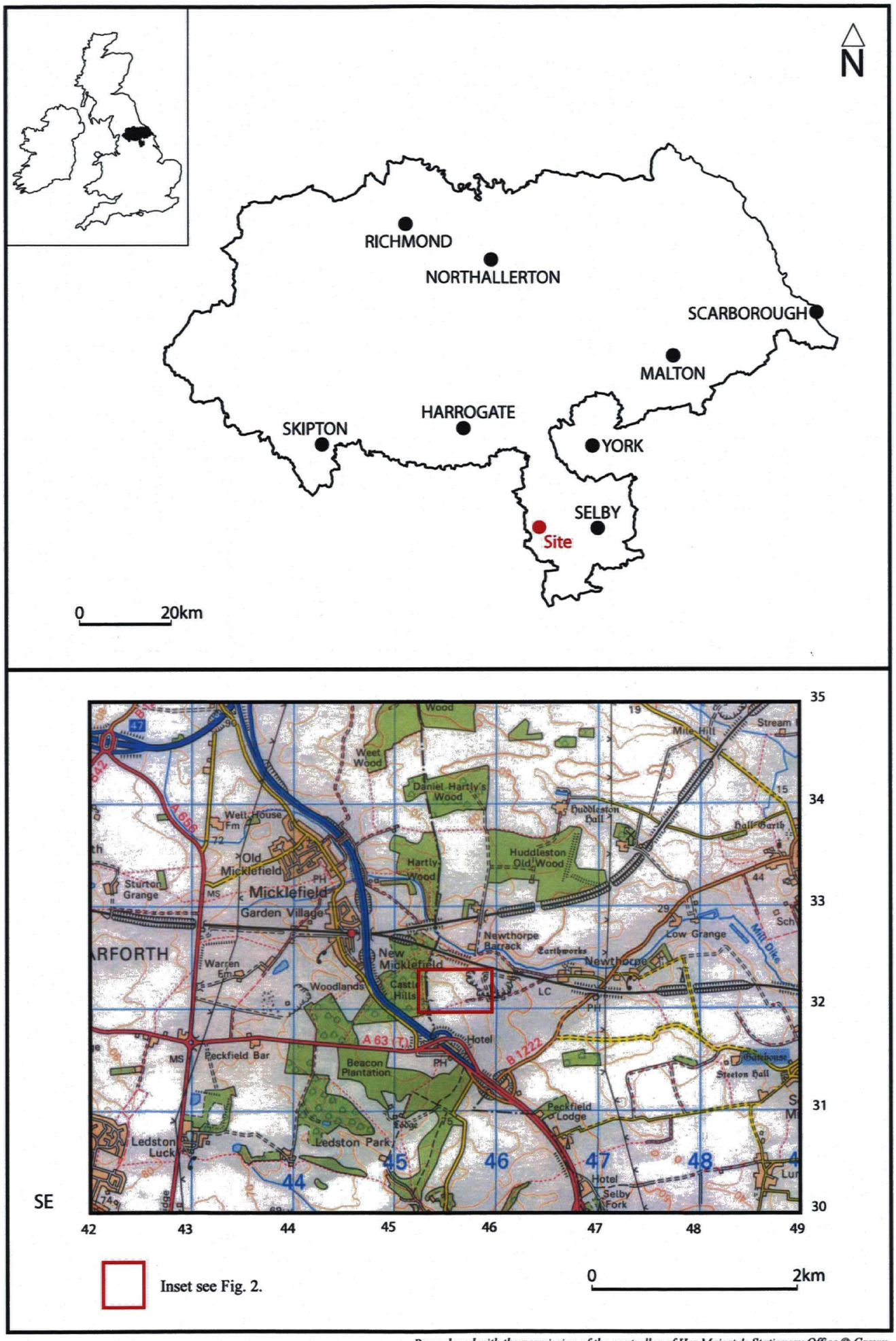


Fig. 1. Site location

Fig. 2. Site location showing the investigated areas in relation to the archaeological anomalies identified by the geophysical investigation of 1998 (Scale1:2000) *Inset see Fig. 3.*

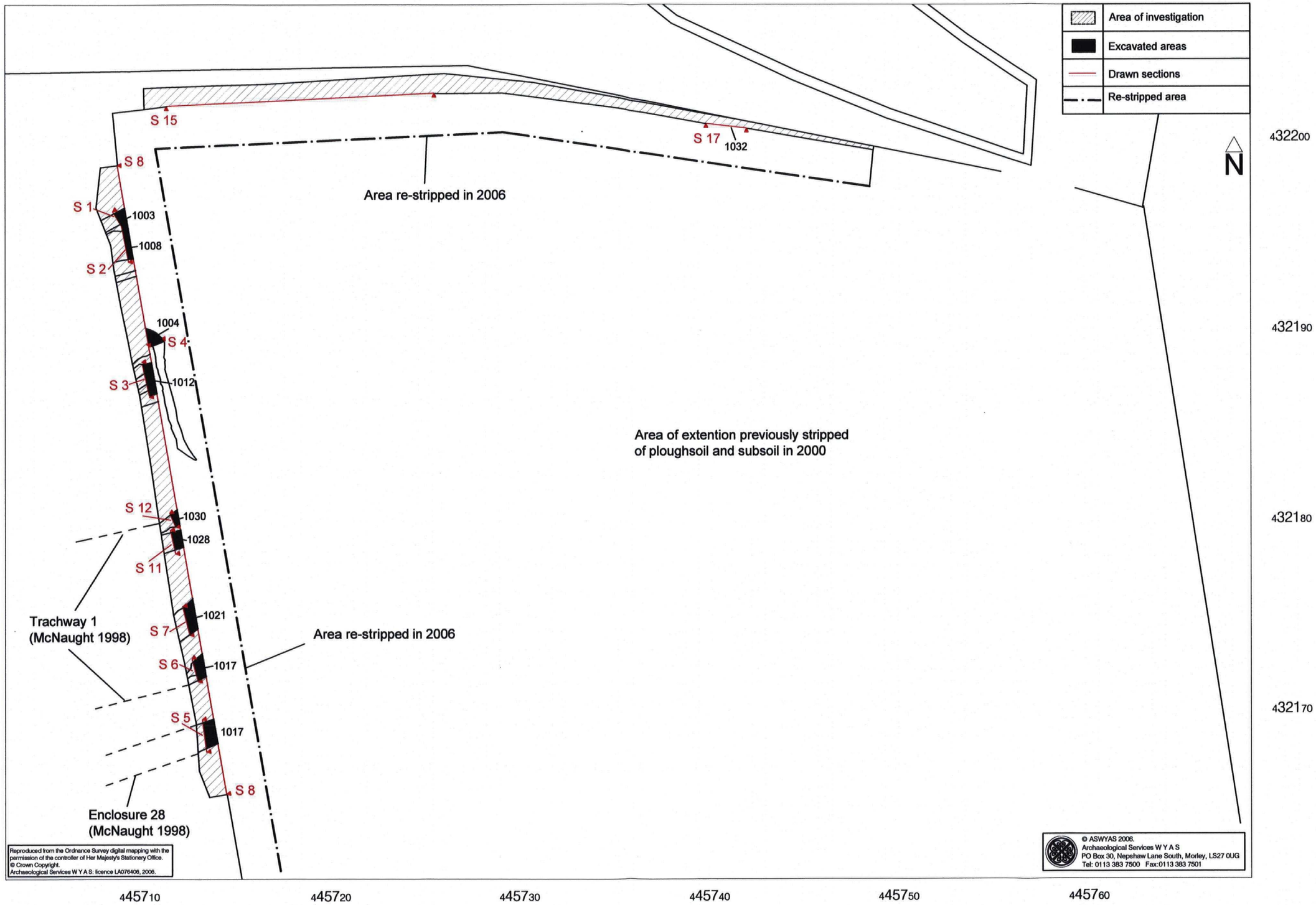
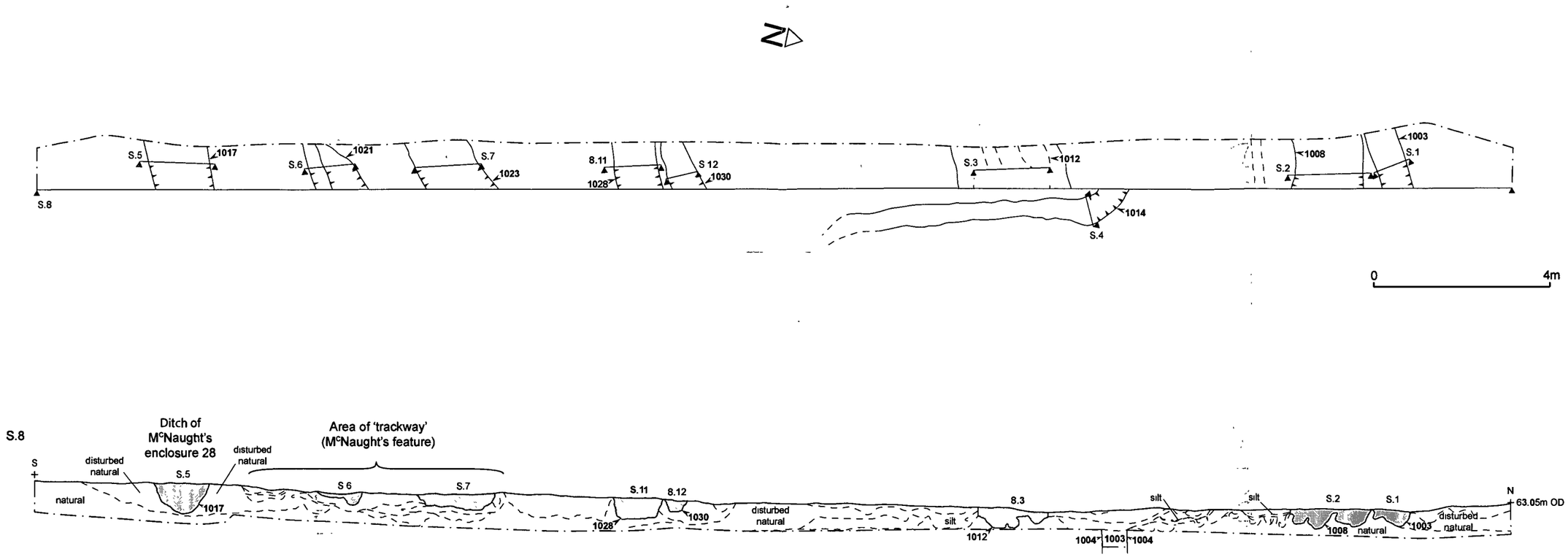
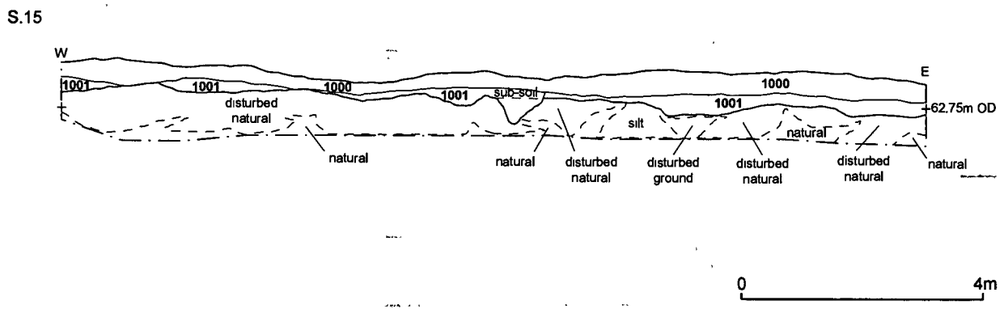


Fig. 3. Excavated areas highlighted in black (1:200)





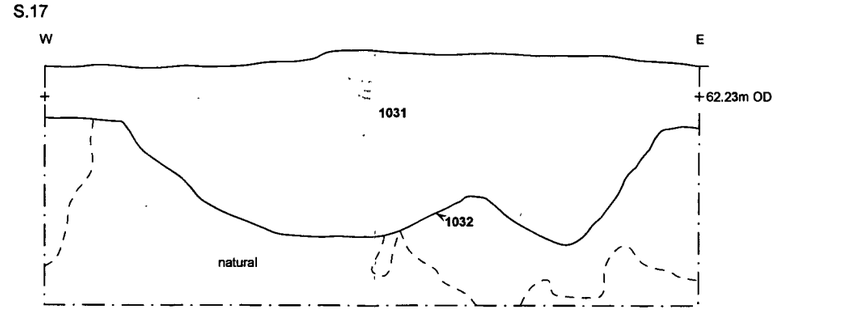


Fig. 4. Plan and major sections

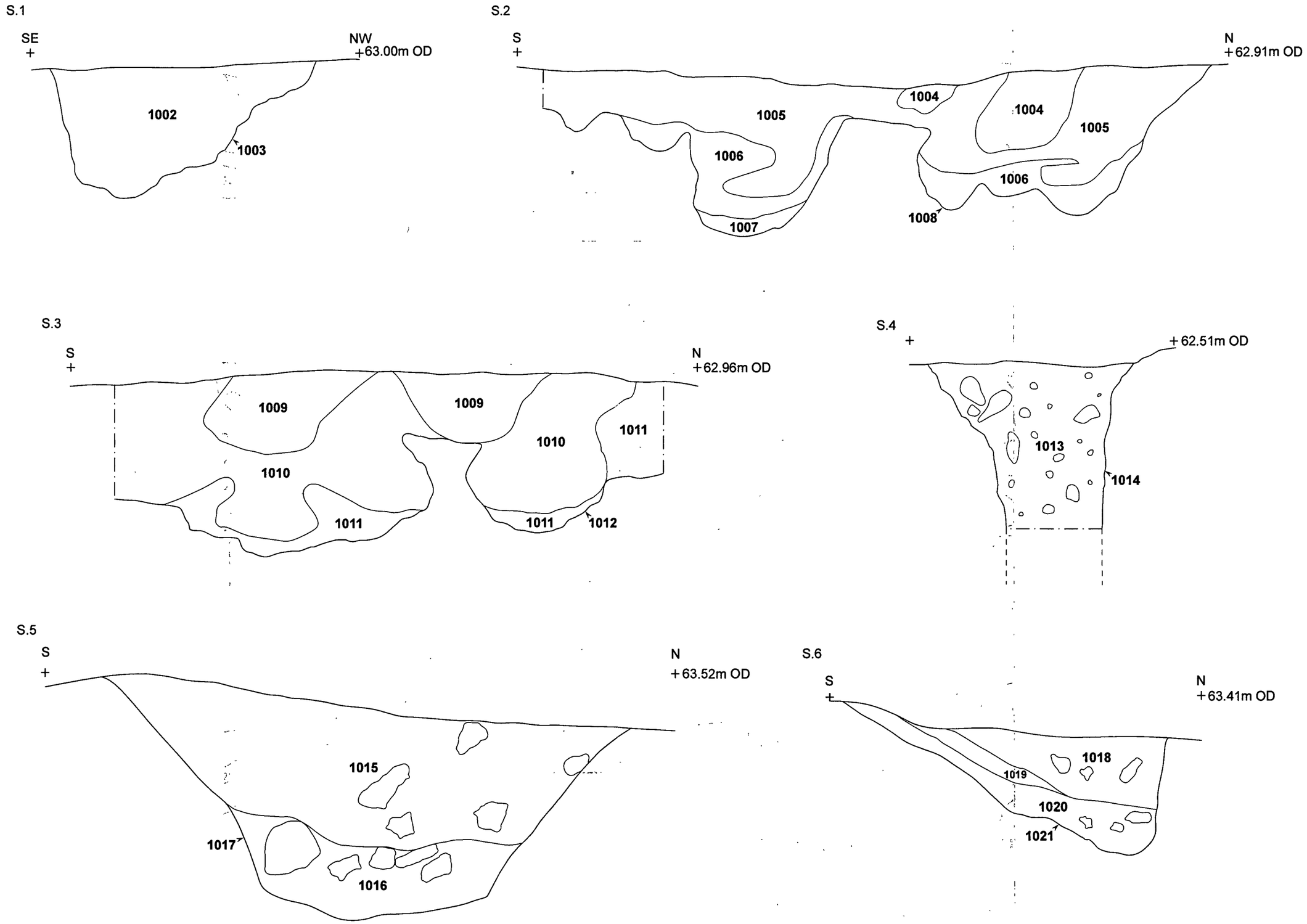


Fig. 5. Sections

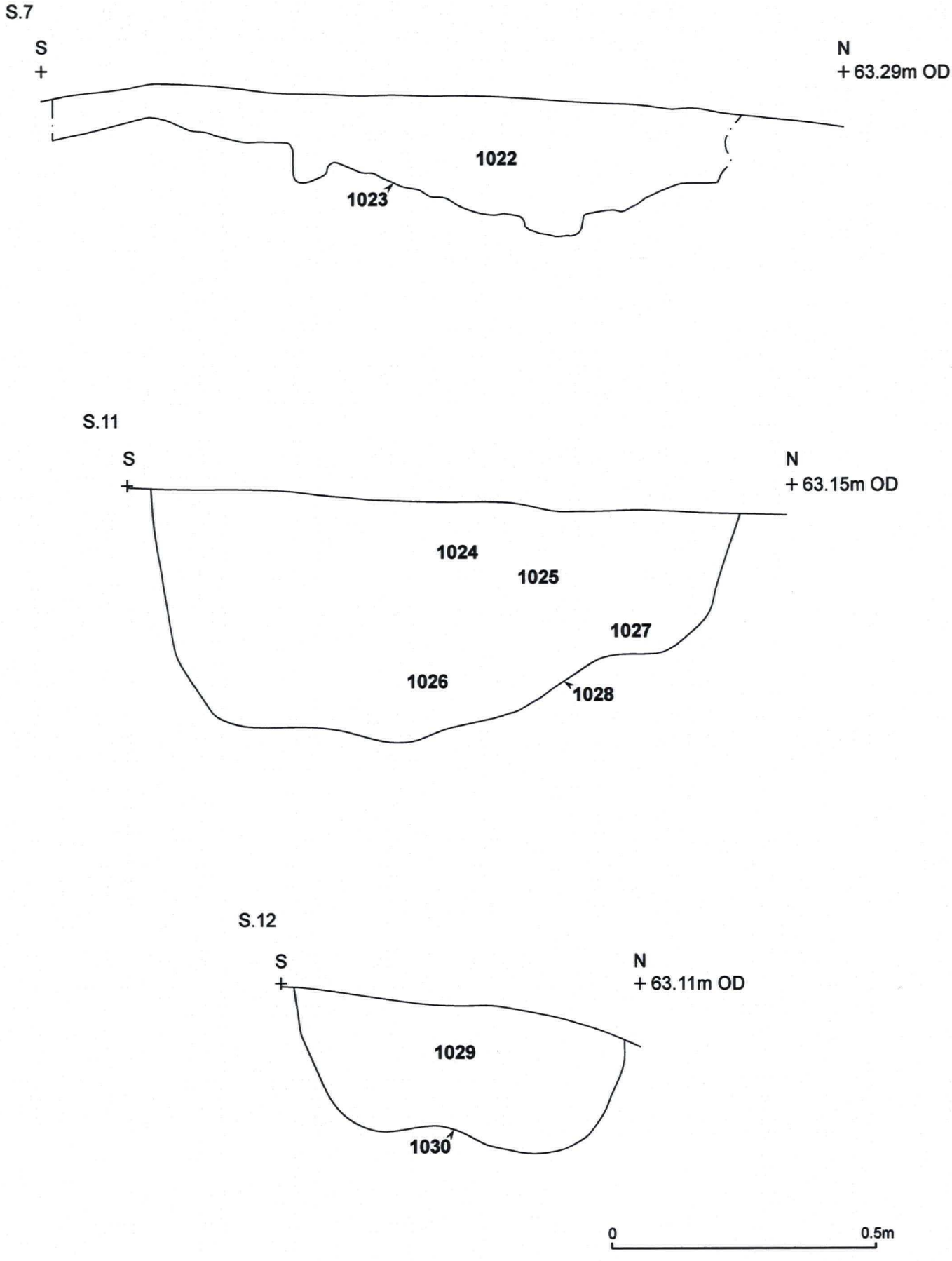


Fig. 6. Sections

Photo 1. Section 8, looking south-west.

Photo 2. Section through Ditch 1017, looking west.

Appendix I

Inventory of primary archive

File no.	Description	Quantity
1	Context register	1
1	Context cards	32
1	Group sheets	0
1	Trench sheet	0
2	Environmental samples register	1
2	Environmental sample forms	3
1	Drawing register	1
2	Drawings	17
Loose	Large drawing sheets	2

Appendix II

Inventory of contexts

Context	Description	interpretation
1000	Top soil	
1001	Sub soil	
1002	Fill	Fill of possible gully 1003
1003	Cut	Cut of possible linear feature
1004	Fill	Upper fill / deposit of 1008
1005	Fill	Tertiary fill / deposit of 1008
1006	Fill	Secondary fill / deposit of 1008
1007	Fill	Primary fill / deposit of 1008
1008	Cut	Cut of possible feature
1009	Fill	Upper fill / deposit of 1012
1010	Fill	Secondary fill / deposit of 1012
1011	Fill	Primary fill / deposit of 1012
1012	Cut	Cut of possible feature
1013	Fill	Fill of natural feature 1014
1014	Cut	Cut of natural linear feature
1015	Fill	Secondary fill of 1017
1016	Fill	Primary fill of 1017
1017	Cut	Cut of possible enclosure ditch
1018	Fill	Upper fill / deposit of 1021
1019	Fill	Secondary fill / deposit of 1021
1020	Fill	Primary fill / deposit of 1021
1021	Cut	Cut of possible feature
1022	Fill	Fill / deposit of 1023
1023	Cut	Possible natural depression
1024	Fill	Upper fill of 1028
1025	Fill	Tertiary fill of 1028
1026	Fill	Secondary fill of 1028
1027	Fill	Primary fill of 1028
1028	Cut	Cut of possible linear feature
1029	Fill	Fill of possible gully 1030
1030	Cut	Cut of possible linear feature
1031	Fill	Fill / deposit of 1032
1032	Cut	Possible natural depression

Appendix III

Inventory of artefacts and other finds

Fabric	Context	Quantity	Details
Animal Bone	1015	2	
Total		2	

Appendix IV

Inventory of samples

Sample	Context	Type	Description
1	1002	GBA	Primary fill of gully 1003
2	1016	GBA	Primary fill of ditch 1017
3	1027	GBA	Fill of possible feature 1028