PEGSWOOD BYPASS,
SOUTH EAST NORTHUMBERLAND

CULTURAL HERITAGE ASSESSMENT

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Prepared for *Northumberland County Council* by:
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Newcastle upon Tyne

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PEGSWOOD BYPASS

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Frontispiece:
View of Whitefield Farm from the north

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SUMMARY

This report represents the cultural heritage component of the Environmental Impact Assessment, which accompanies a planning application by NCC to construct a bypass for Pegswood on the south side of that village. The assessment identifies cultural heritage constraints within the proposed road's corridor of easement and makes recommendations regarding the work required to mitigate the scheme's impact.

The report collates evidence from a wide range of sources, including historic maps, aerial photographs, secondary historical works and the Northumberland County Sites and Monuments Record (SMR). It draws extensively on the previous archaeological assessment work covering the area, much of which was carried out during earlier preparatory planning for the proposed road. Also provided is a summary of the programme of evaluation, comprising geophysical survey and excavation, which was undertaken within the corridor of easement, in consultation with the County Archaeologist, with the specific aim of revealing hitherto unsuspected cultural heritage remains which might be impacted by the proposed scheme.

This has resulted in the identification of a total of 36 sites and monuments within the defined assessment area. Of these 19 were previously recorded on the Northumberland County SMR. Ten listed buildings records also relate to the area. Together these provide contextual information regarding the archaeological and historical development of the area to the south of Pegswood, demonstrating that it has been the focus of intensive human activity, including settlement and agricultural cultivation and coal mining, since later prehistory. Particularly well-represented in the surrounding area are remains of Iron Age/Romano-British settlements and medieval cultivation systems and more recent coal mining.

The assessment concludes that only one site [12] catalogued by the previous phases of assessment and listed in the SMR (NZ 28 NW 27 & 60) will be directly impacted by construction of the Pegswood Bypass. No site in the wider assessment area will be significantly visually impacted, since most of those in the immediate vicinity are sub-surface features. Several features which were revealed by the evaluation programme will be impacted by the construction of the bypass. These include:

i) Two features of probable Iron Age date, comprising a ditch containing Iron Age ceramic material [Site 31] and a group of pits containing charcoal dated to 380 BC +/-10, probably the scars left by the uprooting of tree stumps during slash and burn clearance activity [32].

ii) A complex group of features north of Whitefield Farm, comprising a small reservoir, and a palimpsest of possible ridge and furrow, drainage ditches and trackways, all levelled or infilled during the modern era [Site 12b]. Most of these features are probably relatively modern, but some may conceivably be associated with the medieval township settlement of 'Whetworth' mentioned in documentary sources relating to the Barony of Bothal.

iii) Features of lesser archaeological significance, including the remnants of a grubbed-out early enclosure hedge (16th-17th century?) [30], a suggested pre-medieval fenceline [34] and a possible mine adit [33].

Of the more significant features, the Iron Age remains have been sufficiently investigated during the evaluation phase to obviate the need for further mitigatory excavation. The most prevalent

archaeological features preserved in the subsoil throughout the bypass corridor were extensive traces of medieval ridge-and-furrow agricultural systems, which had levelled by modern ploughing. This medieval cultivation had probably removed or truncated much of the evidence for earlier activity.

The assessment makes a number of recommendations for archaeological work to mitigate the cultural heritage impact of the proposed road. These comprise archaeological monitoring during construction operations or borrow-pitting in the following areas: the slightly higher ground around Site 31; in the field adjacent to the A197 at Whorral Bank, at the west end of the bypass (which would aim to record the full length of linear slot Site 34 and any related features); and in the vicinity of Site 12, N of Whitefield Farm, towards the east end of the proposed scheme.

Itis also recommended that appropriate steps should be taken both before and during construction operations to prevent any damage to Site 3, the grade II listed, 19th-century milepost beside the A197, which lies in very close proximity to ancillery components of the proposed scheme. Protective measures which should be considered include the erection of fencing around the milepost before construction works commence and clear identification of the structure, both in situ and on operational drawings.

1. INTRODUCTION

1.1. Purpose of Assessment

This report, prepared by The Archaeological Practice, University of Newcastle upon Tyne, has been commissioned by Northumberland County Council. It represents one component of a full Environmental Impact Assessment, to accompany a planning application by NCC to construct a bypass for Pegswood on the south side of the village.

The Pegswood Bypass is intended to form the western section of a longer (approximately 6km) link road between the A1 and the A197 east of Pegswood, designed to improve communications within, and access to, South-east Northumberland. At present only the eastern (Pegswood Bypass) and western (A1-A192) sections of the full link road are being proceeded with, and both these sections may be considered as stand-alone schemes with specific road transport benefits. The cultural heritage implications of the A1-A192 link are dealt with in a separate report (Archaeological Practice 2002). This assessment of the eastern section does however include general consideration of the impact of constructing the full scheme, particularly with respect to the known and suspected archaeological sites along the corridor of the link's central section. Along with the corresponding report on the A1-A192 link, it therefore represents the culmination of a sustained programme of archaeological/cultural heritage assessment, review and evaluatory investigation associated with the link road proposal.

The principal aims of the assessment are to identify cultural heritage constraints within the corridor of land likely to be impacted directly by any of the proposed developments, to identify areas or locations where further investigative evaluation is necessary in order to clarify remaining areas of uncertainty regarding the nature and significance of the archaeological resource, and make recommendations regarding the work required to mitigate the scheme's impact.

1.2. Methodology of Assessment

The assessment will:

- define the area concerned (section 2) and list the principal sources of information available for archaeological assessment (section 3).
- outline the previous stages of cultural heritage assessment and summarise results of geophysical survey and archaeological evaluation conducted in furtherance of the scheme (section 4).
- present a catalogue (section 5) and chronological synthesis (section 6) of archaeological data derived from various sources. Accompanying base maps will locate established structures and features within, or in close proximity to, the assessment area.
- provide conclusions with respect to the known and potential archaeological significance of the assessment area (section 7).
- outline the further work proposed to define more clearly the nature of the archaeological record and recommend measures to mitigate the impact of the scheme on the cultural heritage resource (section 8).

The cultural heritage implications of the proposed borrow pit area to the east of Pegswood village are not covered in detail here. These issues will form part of a separate planning application and environmental impact assessment, with an associated programme of archaeological evaluation, initially comprising geophysical survey of the entire area.

2. ASSESSMENT CONTEXT

2.1 Location and Extent of the Survey Area

The assessment focusses on a 2.8km long linear corridor on the south side of Pegswood village between the A197 at Whorral bank to the west of the village and the A197 to the east of the village. The scope of the report extends beyond the immediate footprint of the highway scheme to embrace a wider zone adopted from the previous stages of assessment, which stretches up to 1km from the proposed road alignment. The limits of this zone may be defined as the course of the River Wansbeck to the south, the Bothal Burn to the east, the north-south route of the A197 and B1337 to the west, and, on the north side, a line following the B1337 as far as Fawdon House then roughly eastwards to the Bothal Burn. Consideration of this broader zone provides contextual information regarding those individual sites or historic landscape components which might potentially be physically impacted by the proposed scheme. It also ensures that any site or landscape component which might be more indirectly (e.g. visually) affected is incorporated in the site catalogue (Section 5).

2.2 Topography and Geology

The proposed line traverses an area of rolling farmland to the south of Pegswood village, typical of the coastal lowlands of south-east Northumberland.

The surface geology of the area consists of a blanket of glacial drift, comprising clays, silts, sands and gravels, about 5m in thickness. This blanket is underlain by Upper Carboniferous strata in the form of outcropping Coal Measures, composed of a succession of sandstones, siltstones, mudstones, seatearths and coals, which strikes north-south in the vicinity of East Shiel Hill farm.

2.3 Present land-use

The course of the route is predominantly under arable cultivation.

2.4 Nature of Proposed Developments

The scheme involves the construction of a single carriageway bypass road, 7.3m in width, with a separate 3m wide cycleway/footpath, on the south side of Pegswood village. The route commences to the west of the village at a new roundabout on the A197 to the north of Whorral Bank. It then heads in a south-easterly direction towards the East Coast Main Line railway which is crossed by means of an overbridge. Having crossed the railway line, the road turns eastwards passing directly to the south of Pegswood village to reach another new roundabout on the C395, Bothal road before rejoining the alignment of the present A197 to the east of the village. The alignment of the current A197 which provides access to the west side of Pegswood, is to be diverted southeastwards to link directly with the new Whorral Bank roundabout and the redundant stretch of road closed and grassed over. Similarly, the access to the eastern end of the village will be provided from the new Pegswood roundabout along the C395. Consequently a second redundant stretch of the present A197, which heads eastwards out of the village, will also be closed and grassed over.

2.5 Potential Impacts – General

The construction of a new road has the potential to cause physical damage to cultural heritage remains through excavation and general ground disturbance associated with construction operations and also through ancillery operations such as the diversion of services, site compounds, landscaping and topsoil/subsoil storage areas. In addition important sites could be adversely affected by development which materially affects their setting.

Positive impacts might include a reduction of traffic on existing routes which pass in close proximity to historic buildings and townscapes or other sites, with attendent benefits in terms of lessening the threat to the structural integrity of specific buildings posed by traffic vibration and an overall improvement in the visual and environmental setting a site or landscape complex.

2.6 Established and Potential Significance of the Assessment Area

Scheduled Ancient Monuments
The Scheduling of a site by the Secretary of State denotes it is of at least national significance and provides statutory protection over the defined area of the monument. There are no scheduled ancient monuments within the overall defined assessment area.

Listed Buildings
Listing of built structures by the Secretary of State denotes historical or architectural interest but does not necessarily include all buildings of significance or local importance. There are ten listed structures within the defined assessment area, which potentially might be visually or otherwise affected by the proposed development.

Sites Appearing on Northumberland County Council Sites and Monuments Record (SMR)
Northumberland County Council SMR has been accessed for entries within and in close proximity to the overall assessment area which may be impacted upon by proposed developments. Consideration of sites outside the defined zone enables better evaluation of its archaeological and historical context, highlighting the nature of potential remains within the assessment area. There are 19 entries relating to sites within the defined assessment area.

2.6 Previous Archaeological Assessment and Investigation

Cultural Heritage Assessment Stages 2 and 3 (1996, 1997)
As part of the preceding phases of work on the proposed A1-A197 link road, Stage 2 and 3 archaeological/cultural heritage assessments were carried out in, respectively, 1996 (Tyne and Wear Museums 1996) and 1997 (The Landmark Partnership 1997). These identified a total of 45 sites within the defined assessment area for the full link road and proposed a series of mitigation measures.

Desk Study Review, May 2001
The cultural heritage issues associated with the link road were subjected to a desk study review by The Archaeological Practice in April-May 2001 (ScottDoherty Associates 2001). This involved the re-examination of the Stage 2 and 3 assessments, the consideration of new information which had

been gathered in the intervening period - principally deriving from developer-funded assessments, geophysical survey and mitigatory excavation in advance of opencast coal extraction - and consultations with members of the Northumberland County Council Conservation Team.

The desk study highlighted the relatively dense concentration of known late prehistoric/Romano-British settlements in the assessment corridor. In particular, in July-December 2000 a further site of this period, extensive in area and complex in character (Proctor 2001), had been identified and excavated in the extension to the Pegswood Moor Farm opencast site, immediately to the west of Whorral Bank and the Pegswood Bypass corridor. The discovery of this important Iron Age/Romano-British (IA/RB) site during soil stripping prior to coal extraction drew attention to the considerable potential for the presence of unrecorded remains along some stretches of the proposed corridor. Such remains do not usually survive as upstanding earthworks in this part of Northumberland and under some conditions may evade detection by aerial photography. Accordingly the review of cultural heritage issues concluded that the entire road corridor was an area of some archaeological interest with the potential to contain additional hitherto unsuspected remains.

Archaeological Evaluation Programme

In subsequent consultation, the Northumberland County Archaeologist recommended that, in order to mitigate the impact of the proposed scheme on any unsuspected cultural heritage remains, the corridor of the Pegswood Bypass should be subjected to a programme of archaeological evaluation, initially comprising geophysical investigation followed by targetted trial excavation. Geophysical survey was carried out in by GeoQuest Associates, in November-December 2001 (GeoQuest Associates 2001 and see below section 4.1), and a programme of evaluation trenching and mitigatory recording was initiated by The Archaeological Practice, in May 2002, on the basis of the survey results (see below section 4). Additional evaluation work was carried out in September 2002 to further investigate one feature [PBE/02/803] revealed by the initial trenching.

3. SOURCES FOR ASSESSMENT

3.1 Archival Material and Secondary Sources

The following sources of documentary, cartographic and photographic evidence were consulted:

- ***Northumberland County Record Office, Melton Park, Gosforth (NRO)***
- ***Northumberland SMR, Planning Department (Conservation Team), Northumberland County Council, Morpeth (SMR)***
- ***Northumberland County Library, Morpeth (NorCL)***
- ***City Library, Local Studies section, Newcastle upon Tyne (NCL)***
- ***Museum of Antiquities Record Room, University of Newcastle upon Tyne (MA)***
- ***National Monument Record, Swindon (NMR)***
- ***Air Photograph Library, Unit for Landscape Modelling (formerly the Cambridge University Centre for Aerial Photography) (CAPL)***
- ***Department of Geography Map Library, University of Newcastle upon Tyne (DG)***

3.2 Types of Information

Included amongst the various kinds of information used from each of the above sources are the following:

3.2.1 SMR and Listed Buildings Records

Nineteen sites and monuments recorded on the Northumberland County SMR are situated within the defined assessment area. Ten listed buildings records also relate to the area. Together these provide contextual information regarding the archaeological and historical development of the area.

3.2.2 Primary documentary sources

The majority of sources were consulted through published synthesis, but a number of original documents were also examined, notably including railway construction proposals (QRU p.58a; QRU p.63), tithe awards (see 3.2.4 below) and collections of papers relating to Banks Colliery (ZSA/4/1/1-35).

3.2.3 Secondary and Published Information

Local and Regional Histories
Published works which shed general contextual light upon the assessment area or upon particular aspects of its archaeology or history are included in the bibliography (section 9), and cited where relevant in the synthesis (section 6). John Hodgson's *History of Northumberland* (1832, 164-7) is still the only significant local historical work covering the townships of Pegswood (or Pegsworth at it is still termed by Hodgson - 'now often corruptly called *Pegswood*') and Bothal Desmesne, which together embrace the assessment area.

Cultural Heritage Assessments
Most useful are the preceding Stage 2 and Stage 3 assessment reports for the A1-South East Northumberland Link Road and the separate assessments relating to the Pegswood Moor and Whitefield opencast coal schemes (The Archaeological Practice 1996; Andrew Golightly Ltd 1997). These provide the only detailed archaeological syntheses yet attempted for this part of Northumberland, to the north east of Morpeth.

3.2.4 Map Evidence
The area north of Morpeth is comparatively rich in both the quantity and quality of map evidence surviving from as early as the early 17th century. The following have been found useful in compiling a catalogue of monuments and history of the area:

NRO 782/1, 16 - ***Plans of the Earl of Newcastle's estates (Pegswood, Hebron)****, William Senior, 1632 (Figures 2 & 22)*

NRO - ***Map of the County of Northumberland****, Armstrong, 1769 (Figure 3)*

NRO - ***Map of Northumberland****, Smith, 1808.*

NRO - ***Map of Northumberland****, Fryer, 1820 (Figure 4)*

NRO - ***Map of Northumberland****, Greenwood, 1828 (Figure 5)*

NRO ZSA 51/9 - ***Plans of Climbing Tree, Whitefield and Pegswood Fold Farms****, 1827 (Figure 6-7).*

NRO DT 58 M - ***Tithe Map for Bothal Desmesne****, 1837* (accompanying the 1838 Tithe Award - includes Pegswood Township) *(Figure 8).*

QRU p 58a - ***Plans of the Newcastle & Berwick Railway****, 1844 (Figures 9 & 24).*

QRU p 63 - ***Plans of the Northumberland Railway****, 1844 (Figure 10).*

NRO - ***First Edition Ordnance Survey****, 1863, Northumberland, 25" Sheet LXIV*

NRO - ***First Edition Ordnance Survey****, 1866, Northumberland, 6" Sheet LXIV (Figure 23)*

NRO - ***Second Edition Ordnance Survey****, 1898, Northumberland, 6" Sheet LXIV (Figure 11)*

NRO - ***Third Edition Ordnance Survey****, 1924, Northumberland, 6" Sheet LXIX (Figure 12)*

NRO - ***Fourth Edition Ordnance Survey****, 1938, Northumberland, 6" Sheet LXIX (Figure 13)*

3.2.5 Aerial Photographs

An aerial photographic search was made of the following archive sources: ***CAPL, DG, MA, NCL, SMR & NMR***. This revealed a sizeable number of aerial photographs covering the corridor of the proposed Pegswood Bypass, the majority of which is held by the National Monument Record (***NMR***) and the Northumberland County SMR (***SMR***). This coverage predominantly comprises black and white vertical photographs, taken at relatively high levels (scales ranging from 1:7700 to 1:10560) between 1946 and 1989. There is considerable duplication in the material held by these two collections, particularly in the earlier series, with both archives holding copies of the photographs taken by the RAF in 1946-47. Oblique, low-altitude coverage is restricted to views of particular monuments or features identified by Tim Gates, specifically the complex of cropmarks at NZ 228864 (Site 14) and the early 20th-century colliery site at NZ 21178715 (Site 23) above Whorral Bank. The latter views also show cropmarks on the west side of the A197 (not within the assessment area), probably associated with the extensive Iron Age site at Pegswood Moor.

Coverage of the assessment area held by the University of Newcastle upon Tyne Air Photograph Collection (***MA***), housed in the Museum of Antiquities, is restricted to two low-altitude oblique photographs of Bothal and environs (Sites 1 and 7) and the area NE of Pegswood, both taken by Tim Gates. The Dept of Geography Map Library in the University of Newcastle upon Tyne (***DG***) holds one set of b/w vertical photographs (scale 1:10560) covering eastern Northumberland, taken for the National Coal Board in 1968. The sequence covering Pegswood provides no additional information. Two of the repositaries - ***CAPL*** and ***NCL*** - held no coverage of the area.

NMR:

Verticals

Sortie no. 106G/SCOT/UK/138; frames 3139-3142; 03 July 1946
Sortie no. 106G/SCOT/UK/138; frames 3162-3165; 03 July 1946
Sortie no. CPE/SCOT/UK/221; frames 3172-3174; 27 June 1947
Sortie no. CPE/SCOT/UK/221; frames 3214-3218; 27 June 1947
Sortie no. 541/A/485; frames 3117-3119; 24-6-1949
Sortie no. 58/RAF/2625; frames 19-20; 8 November 1958
Sortie no. 58/RAF/2625; frames 55-56; 8 November 1958
Sortie no. OS/68111; frames 292-294; 4 May 1968
Sortie no. OS/68113; frames 447-449; 13 May 1968
Sortie no. OS/71491; frames 026-028; 7 September 1971
Sortie no. OS/75027; frame 018; 23 April 1975
Sortie no. MAL/77023; frame 218; 7 July 1977
Sortie no. MAL/77024; frame 069; 7 July 1977
Sortie no. OS/77130; frames 004-006; 28 August 1977
Sortie no. OS/89306; frames 016-018; 19 June 1989
Sortie no. OS/89306; frames 043-045; 19 June 1989
Sortie no. OS/89306; frames 059-060; 19 June 1989

NMR Obliques:

NZ 2286/10-12; TMG 15934/01, 15933/81-82; 27 June 1994 (NZ 228865)
NZ 2087/11; TMG 15958/16; 14 July 1994 (NZ 209871)
NZ 2187/1-2; TMG 15958/17, 15958/20; 14 July 1994(NZ 211871, 210871)

SMR:
106G/SCOT/UK/138; frames 3169; 03 July 1946
CPE/SCOT/UK/221; frames 3214-3219; 27 June 1947
CPE/SCOT/UK/221; frames 4247-4254; 27 June 1947
BKS/18728-32/1960
BKS/651682-84/1971
BKS/651769-72/1971
Aerofilm A244225 (n.d.)

MA:
NZ 2386/A
NZ 2387/A

DG:
Run/film 20/6762, frames 6067-6071

The predominant feature revealed by this coverage are extensive systems of ridge and furrow, some evidently in the process of being destroyed by modern arable cultivation when the photographs were taken. This confirms and amplifies the evidence derived from the geophysical survey and evaluation trenching. Traces of mining activity can also be seen, with bellpits visible along the small fields closest to the banks of the River Wansbeck (cf. Sites 20-21). Detailed reference to the contribution of the aerial photographic coverage to the understanding of individual sites may be found in the relevant gazetteer entries (Section 5).

3.2.6 Site Inspection and Local Information

An extended visit was made to assess the current condition of archaeology within and around the defined assessment area. During these visits a range of features were observed and photographically recorded, and local informants interviewed. The principal observations derived from this inspection have been included in the catalogue, below (section 5).

3.2.7 Geophysical Investigation and Archaeological Evaluations

Contextual information was provided by the results of a programme of geophysical survey sampling undertaken in the wider assessment area during April 1998, in connection with a proposed opencast coal scheme near Whitefield Farm (Archaeological Services (WYAS) 1998). During November-December 2001 geophysical survey was carried out throughout the bypass corridor by GeoQuest Associates, with the aim of revealing hitherto unsuspected cultural heritage remains which might be impacted by the proposed scheme. The results of this work (cf. GeoQuest Associates 2001) provided the basis for a programme of targeted trial excavation conducted by The Archaeological Practice in May-June and September 2002 (The Archaeological Practice 2002c) which is summarised below (section 4).

4. RESULTS OF EVALUATION

4.1 Geophysical Survey

The geophysical survey was undertaken by GeoQuest Associates during November-December 2001 (GeoQuest Associates, 2001, unpub.). An 80m wide corridor of easement of the proposed bypass, encompassing a total area of 16.25 hectares, was mapped using a fluxgate gradiometer.

The full results of the investigation are set out in the report by GeoQuest (*ibid.* 2001). For ease of reference the report divided the proposed bypass corridor into three blocks - west, central and east. The western stretch of the corridor was bounded by the A197 at Whorral Bank and the East Coast Main Line Railway, the central stretch by the railway and the western edge of an area of former opencast coal extraction (Climbing Tree 1957), whilst the eastern stretch of the investigated corridor, lay between the eastern limit of the former Climbing Tree opencast coal extraction site and the A197 at Pegswood Cemetery. The area of the Climbing Tree opencast site had been excluded from the survey.

Twenty-nine possible features were identified within the corridor, with varying degrees of confidence. Of these, sixteen were identified, in consultation with the County Archaeologist as being of significant archaeological interest.

No.	Feature - West Block	Confidence limit
f3	Ditches	20%
f4	Ditch	30%
f8	Two ditches	15%
f11	Ditch	15%
f12	Ditch	20%
f13	Pit, kiln, fire or shaft	80%
f14	Ditch	20%
f15	Ring ditch or enclosure	35%
	Feature -Central Block	
f16	Iron pipe or mine adit	70%
f19	Ditched enclosures	40%
f20	Ditch	15%
	Feature -East Block	
f24	Debris scatter	75%
f25	Debris scatter	75%
f27	Ditches/garden plots	40%
f28	Ditches/garden plots	40%
f29	Ditch/palaeochannel	70%

Features f24, f25, f27 and f28 were initially interpreted as footings for demolished buildings and associated garden plots, but analysis of the historic map evidence showed that f24 corresponded to a resevoir depicted on the 1st edition Ordnance Survey (1866), but not on the 2nd edition (1898) or later series. This presumably went out of use and was infilled at some stage between 1866 and 1898 with brick debris or similar material which provided the geophysical response picked up in the survey.

Features f15 and f19 were defined as the most potentially significant sites, comparable to the prehistoric or Romano-British features known elsewhere in the vicinity of Pegswood. Certain features (f3, f8, f11, f12, f14, f20), probable ditches, were accorded very low confidence ratings.

4.2 Evaluation Trenching

Consequently, in close consultation with the County Archaeologist, a further programme of evaluation, in the form of trial trenching, was devised to investigate the features listed above, to confirm their identification and determine, as far as possible, their date, function and state of preservation (cf. The Archaeological Practice 2002a). This followed a staged approach, with a second phase of investigation, aimed at the areas of highest potential and some of the most uncertain features, being contingent upon the results of the Stage 1 trenching. The trenches were all the width of a 1.5m toothless ditching bucket and generally set out at ninety degrees to the feature they were intended to investigate. They were also targeted, where suggested by the geophysics, at the intersection of features.

In all the trenches the ploughsoil overburden was removed by machine excavator and then cleaning and investigation of any archaeological features thus identified undertaken by hand.

The extent of evaluation trenching is shown on Figures 14-16 and is tabulated below. The threefold division of the bypass corridor adopted during the geophysical survey was retained for convenience. The Stage 2 contingency trenches which were not excavated are shown in italics. The extension to Trench 3 and the addition of trenches 23 and 24 were later amendments to the programme made during the course of excavation in consultation with the Assistant County Archaeologist.

No.	Feature - West Block	Field	Stage 1 Trenches	Stage 2 Contingency
f3	Ditches	1		**T1**: 1 x 1.5m by 25m
f4	Ditch	2	**T2**: 1 x 1.5m by 15m	
f8	Ditches	3		**T3-4**: 2 x 1.5m by 10m **T3** extended by 15m at each end to become 1.5m by 40m **T23-24** 2 x 1.5m by 10m
f11	Ditch	4		*__T7__: 1 x 1.5m by 10m*
f12	Ditch	4	**T5**: 1 x 1.5m by 30m (with f14)	
f13	Pit, kiln, fire or shaft	4	**T6**: 1 x 1.5m by 10m	
f14	Ditch	4	**T5**: 1 x 1.5m by 30m (with f12)	
f15	Ring ditch or enclosure	4	**T8**: 1 x 1.5m by 15m	**T9**: 1 x 1.5m by 10m

No.	Feature -Central Block	Field	Stage 1 Trenches	Stage 2 Contingency
f16	Iron pipe or mine adit	6	**T14**: 1 x 1.5m by 15m	

f19	Ditched enclosures	5	**T10**, **T12**: 2 x 1.5m by 15m	*Total trenching equivalent to 1.5 by 50m, to include **T11** (1 x 1.5m by 20m) and **T13** (1 x 4m x 5m)*

No.	Feature -East Block	Field	Stage 1 Trenches	Stage 2 Contingency
f24	Debris scatter	7	(See historic map evidence)	
f25	Debris scatter	7		***T19**: 1 x 1.5m by 10m*
f27	Ditches/garden plots	7	**T20**: 1 x 1.5m by 15m	
f28	Ditches/garden plots	7	**T21**: 1 x 1.5m by 15m	
f29	Ditch/palaeochannel	8	**T15**: 1 x 1.5m by 10m	***T16-T17**: 2 x 1.5m by 10m*

Further evaluation (Stage 3) was undertaken during September 2002, on the recommendation of the Assistant County Archaeologist, to investigate a shallow, charcoal-filled, pit feature (803) revealed in evaluation trench 8, in the western block of the bypass corridor. Radiocarbon analysis of charcoal from the fill (802) had yielded an Iron Age date (see below 4.3.1) and further work was considered necessary to resolve the extent, character and potential associations of the shallow pit. This involved the reopening of trench 8 and the excavation of a 10 x 15m box trench (22) immediately to the west of trenches 8 and 9, as set out in the project design for this stage of the evaluation programme (The Archaeological Practice 2002b).

No.	Feature - West Block	Field	Stage 3 Trench
803	Charcoal-filled pit	4	**T22**: 1 x 10m by 15m
f15	Ring ditch or enclosure		

4.3 Results

Detailed discussion of the results with full trench descriptions, interpretation and relevant specialist analyses, is provided in the evaluation report (The Archaeological Practice 2002c). A summary of the principal findings is presented below

4.3.1 Iron Age

Trenches 3, 8 and 22 all revealed archaeologically significant features of probable Iron Age date.

In Trench 3, a north-south aligned ditch (PBE/02/303) was revealed roughly midway along the trench [Site Catalogue no. 31]. The position of this ditch corresponded to that of feature f8W, the more westerly of two putative ditched features labelled f8 (f8W), which had been identified by the geophysical survey. The ditch was *c*. 1.0m wide and 0.25m deep, with a broad V-shaped profile, and contained a mixed fill of firm, grey-brown clay, sand and silt (302), which yielded a single sherd of possible Iron Age ceramic.

No associated features were encountered in the extensions to Trench 3 whilst the similarly negative evidence of Trenches 23 and 24 confirmed that the short length indicated by the geophysical survey plot was indeed all that remained of ditch 303/f8W. It is likely that the ditch has been substantially truncated by modern and medieval ploughing, and that, in its original state, it was significantly longer and deeper.

A shallow, irregular, charcoal-filled pit (cut 803/2204; fills 802/2202, 2203) found towards the southern end of Trench 8, and fully revealed by Trench 22. The pit was 0.6m in diameter and 0.1m deep, with a loose, sandy-silt fill which contained much charred material. This produced a radiocarbon date of 400-350 BC or 300-220BC (2 Sigma calibration), with the most likely range being 390-370BC (1 sigma calibration), which places it squarely within the Iron Age. A second very similar feature (2207) was found 1m to the NNW in Trench 22. These very irregular cuts can best be explained as the result of the uprooting of trees during Iron Age 'slash and burn clearance [Site 32]. The ground surface associated with that clearance phase had been removed by medieval and modern ploughing, which must also have truncated cuts 803/2204 and 2207 to some degree. No trace of the supposed ring ditch, f15, was encountered in either Trenches 8, 9 or 22.

These three features may represent surviving remnants of an outlying field boundary and clearance activity associated with the extensive Iron Age/Romano-British settlement at Pegswood Moor, to the west of Whorral Bank, or with a single rectilinear settlement enclosure known from aerial photography 400m south east of Climbing Tree farm. If the interpretation of the shallow pit features is correct, the C14 date obtained from their charcoal-rich fill would suggest that Iron Age farmers made began to make inroads into uncultivated woodland in the area south of Pegswood early in the 4th century BC. This tentative finding is of some interest and may in due course be compared with the dates obtained from the Pegswood Moor settlement site.

4.3.2 Medieval and Modern

Furrows representing the remnants of north-south aligned, ridge and furrow cultivation were revealed in trenches 1, 2, 5, 6, 8 and 9, confirming the evidence of the geophysical survey for the existence of extensive areas of such cultivation systems especially in the eastern and central sections of the corridor. The survey and excavation results demonstrate that, despite the ridged earthworks having been levelled by more recent ploughing, the furrows still survive as infilled sub-surface features.

In Trench 2, two cut features, linear ditch 209 and pit 205, were excavated which probably represent, respectively, the remains of grubbed-out early enclosure hedge and associated tree bowl [Site 30]. The hedge may well have been laid in the sixteenth or early seventeenth century, and removed in the later eighteenth-early nineteenth century when fields were regularised. The linear cut would represent the grubbing out, rather than the laying of the hedge, which would thus account for the modern pottery in its fill (208).

The complex of geomagnetic anomalies revealed towards the eastern end of the corridor, just north of Whitefield Farm (f24-25, f27-28), were shown to represent a variety of features, mostly of relatively modern date. The 1st edition 6 in Ordnance Survey (1866) identifies f24 as a small 'reservoir' with associated conduits. This was levelled and infilled prior to 1898 (2nd edition 6 in Ordnance Survey) and preserved as an area of brick debris apparent on the geophysical survey. A similar anomaly (f25) at the E edge of the field probably represents a spread of brick debris at the field gate associated with access trackways leading to the Climbing Tree opencast site in 1957-58. These trackways are visible on aerial photography (cf. 58/RAF/2625/19-20) and evident as a series of E-W linear, geomagnetic anomalies. One of the tracks was revealed in Trench 21 as a spread of sandy, silty clay (2102), containing modern pottery, bone and glass, which filled a shallow, ENE-WSW oriented, linear scoop (2103), cut into the subsoil and demarcated along its northern edge by a round-bottomed ditch. Apparent on the geophysical survey, underlying the southernmost of the tracks, were traces of N-S oriented ridge and furrow giving the overall pattern of anomalies a grid-like aspect. Although demonstrably of relatively modern date in most cases, some of these features - the ridge and furrow for example - may conceivably be associated with the medieval township

settlement of 'Whetworth' mentioned in documentary sources relating to the Barony of Bothal. However no medieval material was found in Trench 21.

The location of f16 was confirmed and the feature interpreted as a possible mine adit [Site 33] , however no trace of the supposed mine shaft f13 was encountered.

4.3.3 Other features

The interpretation of f29 as a palaeochannel, proposed in the geophysical survey report, was confirmed. A narrow slot (105) found in Trench 1 probably corresponds to part of linear feature f3, but no material was recovered in association with it, and as a result the slot cannot be firmly dated. The feature is oriented NE-SW and does not respect the gently curving, north-south alignment of the medieval/early modern ridge and furrow. It may therefore represent a pre-medieval fence line, and could conceivably form part of an outlying field system associated with the Iron Age/Romano-British settlement at Pegswood Moor.

No features were revealed in trenches 4, 10, 12 and 20 and no evidence was uncovered for ditched features f8E, f12 and f14, nor for ring ditch f15 or enclosures f19. Some of these features were in any case only accorded low confidence ratings by the geophysical contractor, and alternative explanations for these magnetic anomalies may now be preferred, such as compositional variation in the underlying drift or magnetic particle sorting caused by ploughing (cf. GeoQuest Associates 2001).

4.3.4 General Conclusions

The most prevalent archaeological features encountered throughout the bypass corridor are the widespread patterns of ridge and furrow cultivation. The creation and prolonged use of these medieval agricultural systems has probably been responsible for removing most traces of earlier cultural activity, before the ridge and furrow earthworks were in their turn levelled by modern ploughing.

The state of preservation of archaeological features in the Pegswood Bypass corridor may be compared with that reported at Pegswood Moor Opencast Coal Site to the west of Whorral Bank, during excavation of the IA/RB settlement there. As its name suggests this area formerly represented the rough common grazing for Pegswood township. As a consequence it has been subjected to arable cultivation for a shorter period. Even so there had been extensive plough damage to the site, resulting in the horizontal truncation of archaeological remains with only the lower portions of cut features surviving (Proctor 2001, 36).

5. SITE CATALOGUE

The catalogue below provides a listing both of the sites within the corridor likely to be materially affected by the bypass and of monuments in the wider vicinity which may be visually impacted or which may provide contextual information regarding the historical development of the area. This catalogue is derived from consultation of the sources noted in section 3 and the results of the evaluation programme set out in the preceding section. Cross referencing is provided to the site numbering in the previous Stage 2 and 3 Environmental Assessments (CH. . .) plus other relevant archaeological assessments, along with the relevant SMR, NMR and Scheduled Ancient Monument identifiers.

5.1 Listed Buildings

[1] Bothal Castle; *LB 1/; SMR no. NZ 28 NW 7; NMR ; NGR NZ 2399 8649; CH 2*
Medieval castle, listed grade I. Comprises gatehouse, adjacent wing to west and curtain wall to south. Gatehouse was probably built in 1343 when licence to crenelate was granted. Decorated with a fine set of armorial shields. Restored from ruin 1830-31. Adjacent wing built c. 1858, incorporating some medieval walling, extended and heightened in 1909. Much of original curtain wall, with traces of buildings attached, remains to south of residential block. Some sections probably part of the Bertram 'mansum' predating the licence to crenelate. Some 19th-century patching and repair.

[2] Lady Chapel & Lady Well; *LB 2/42; SMR no. NZ 28 NW 9; NMR 25364; NGR NZ 2215 8602; CH 3*
Lady Chapel - 14th century with probable late 15th century rebuilding. Was still in use in the 16th century. Listed Grade II. The adjacent, unlisted Lady Well may be a natural formation.

[3] Milepost; *LB 2/43; NGR NZ 2169 8750; CH 4*
A mid 19th century milepost beside the A197. Listed Grade II.

[4] The Wansbeck railway viaduct; *LB 2/45; SMR no. NZ 28 NW 31; NGR NZ 2149 8647; CH 5*
Viaduct built in 1847 to enable the Newcastle-Berwick railway to cross the River Wansbeck. Listed Grade II.

[5] Cookswell House; *LB 2/46; NGR NZ 2199 8748; CH 6*
Cookswell House built in 1768. Listed Grade II.

[6] Pegswood North Farm; *LB 2/49-53; NGR NZ 2230 8754; CH 7*
Pegswood North Farm, mid 18th century. Farmhouse listed Grade II (2/49), along with its garden walls (LB 2/50), an outbuilding (2/51), farm buildings (2/52) and a cart shed (2/53).

5.2 Other Sites

[7] Bothal Ridge and furrow; *SMR no. NZ 28 NW 22; NGR NZ 239 867*
Several fields of ridge and furrow to the west side of Bothal village (cf. 58/RAF/2625 frames 19-20, 8-11-1958; MA: NZ 2386/A).

[8] Flints; *SMR no. NZ 28 NW 46; NGR NZ 2385 8630*
Three flints found by J. Weyman.

[9] Flints; *SMR no. NZ 28 NW 47; NGR NZ 2325 8650*
Two flints found by J. Weyman.

[10] Bothal Mill; *SMR no. NZ 28 NW 61; NGR NZ 2350 8625*
Corn Mill with mill race and a separate miller's house (Ordnance Survey 6 inch 2nd edition - 1866). Still operating in 1898 (Ordnance Survey 6 inch 2nd edition), but disused by 1924 (Ordnance Survey 6 inch 3rd edition).

[11] Cropmark; *SMR no. NZ 28 NW 85; NGR NZ 2350 8652*
Cropmark of a possible enclosure north of Bothal Mill. Only the south and east sides clear (aerial photograph BKS/651683/1971).

[12a & b] Whitefield DMV; *SMR no. NZ 28 NW 27 & 60; NGR NZ 22928689; CH 23*
Whitefield Farm (12a; SMR NZ NW 27) - identified as the site of a deserted medieval village (DMV) by Godwin (1971), followed by Clack and Gosling (1975, Gazetteer 129) and Tyne & Wear Museums (1996), but considered doubtful by The Landmark Partnership (1997). May represent the site of the village or hamlet of 'Whetworth', mentioned in documentary sources from 1240 to 1544 as one of the principal settlements within the Barony of Bothal (cf. Hodgson 1832, 123, 165-6). Whetworth had 14 soccage tenants in 1240 (Hodgson 1832, 123). Whitefield Farm is first depicted on Armstrong's map (1769), and with reasonable accuracy on a plan of 1827 (ZSA 51/9). Farm complex substantially enlarged by the time of the 1837 tithe map (NRO DT 58M).

No surface indications of a medieval settlement (but note [13] - ridge and furrow in the field immediately NW of the farm). The 1st edition 6 in Ordnance Survey (1866) shows a small 'reservoir' with associated conduits 80m NW of the farm (Site 12b; SMR NZ 28 NW 60). Levelled/infilled prior to 1898 (2nd edition 6 in Ordnance Survey) and preserved as an area of brick debris apparent on the geophysical survey (GeoQuest Associates 2001). A similar anomaly at the E edge of the same field probably represents a spread of brick debris at the field gate associated with access trackways leading to the Climbing Tree opencast site in 1957-58. These trackways are visible on aerial photography (cf. 58/RAF/2625/19-20) and evident as a series of E-W linear, geomagnetic anomalies. One of the tracks was revealed in excavation (The Archaeological Practice 2002c and above 4.3.2). Apparent on the geophysical survey, underlying the southernmost of the tracks, were traces of N-S oriented ridge and furrow giving the overall pattern of anomalies a grid-like aspect.

[13] Ridge and furrow; *NGR NZ 2293 8683 (centre); CH R & F*
Ridge and furrow in the field NW of Whitefield Farm. Seen most clearly on aerial photograph 58/RAF/2625, frame 19 (8-11-1958).

[14] Cropmark complex; *NGR NZ 228864 (centre); CH A*
An area of complex cropmarks, including pit alignments, a square, single-ditched enclosure and a bell-pit, within a circular, double-ditched enclosure recognised through both aerial photography (cf. TMG 15933/81-2, 15934/01; for transcription see Tyne and Wear Museums 1998) and geophysical survey (Archaeological Services WYAS 1998). Squarish enclosure probably represents an Iron Age/Romano-British farmstead, but other periods almost certainly represented, including earlier prehistoric occupation and post-medieval mining activity. Situated on a large promontary between

the River Wansbeck and Whitefield Dene, bounded to the W by a sinuous, possibly pre-enclosure, hedgeline.

[15] Circular cropmark; *NGR NZ 224 863; CH B*
Small (c. 10m) diameter circular cropmark recognised through aerial photography and geophysical survey (Tyne and Wear Museums 1998; Archaeological Services WYAS 1998). It may represent the ring ditch of a prehistoric sepulchral barrow or a more recent agricultural feature.

[16] Rectilinear enclosure; *SMR no. NZ 28 NW 32; NGR NZ 2218 8617; CH 18*
Faint traces of a double-ditched, rectilinear enclosure of possible Iron Age/Romano-British date visible as a cropmark on aerial photography (RAF/CPE/SCOT/UK/221/3302: 27-6-1947). Possible entrance to the W. Slight platform visible at ground level.

[17] Ridge and furrow; *NGR NZ 2190 8645 (centre); CH R & F*
Gently curving ridge and furrow in the field S of Climbing Tree Farm. Roughly E-W oriented. Continues into S part of field immediately to the E. Best seen on aerial photographs 58/RAF/2625; frame 56; (8-11-1958).

[18] Ridge and furrow; *NGR NZ 2205 8650 (centre); CH R & F*
Ploughed out ridge and furrow E of Climbing Tree Farm identified by geophysical survey (Archaeological Services WYAS 1998, fig. 8). Oriented WNW-ESE.

[19] St Catherine's Well; *NMR 25361; SMR no. NZ 28 NW 8; NGR NZ 21548646; CH 21*
St Catherine's Well - a circular dry well, lined with roughly dressed stones. No dateable features or local tradition for the name.

[20] Ridge and furrow and bell pits; N*GR NZ 215 867 (centre); CH 40*
Faintly discernable ridge and furrow. Aerial photographs show field contains two sets separated by a stream course. To east, an E-W oriented system and to west, a N-S aligned set. Possible bell-pits visible in W half. Complex best seen in aerial photographs 58/RAF/2625 frames 55-56 (1958); OS/89306 frames 017-018, 043-044 (1989).

[21] Ridge and furrow and bell pits; *NGR NZ 213 867 (centre); CH 39*
Well-preserved N-S oriented ridge and furrow. Part of same set preserved in W half of field to E [Site 21]. Wavelength c. 4m, depth of furrow up to 0.35m. Cut by up to four bell pits, Aerial photographs show trackways leading from W edge of field to pit in centre of field . Complex best seen in aerial photographs CPE/SCOT/UK/138 frames 3214-6 (1947); 58/RAF/2625 frames 55-56 (1958); OS/89306 frames 017-018, 043-044 (1989).

[22] Banks Cottages (site of); *NGR NZ 2120 8685;*
Banks Cottages or Banks-houses, just east of Quarry Bank. Row of cottages shown on the Ordnance Survey 6 in 1st edition (1866). Houses the miners working at Banks Colliery (Hodgson 1832, 166-7). Only one building is marked on the 2nd edition and none on the 3rd edition (1924), suggesting that the cottages were gradually abandoned after the opening of Pegswood Colliery and the construction of the surrounding terraced housing.

[23] Early 20th-century mine; *SMR no. NZ 28 NW 117; NGR NZ 2117 8715; CH 45*
Two 'old shafts' with adjacent buildings and a spoil heap marked on the 3rd edition Ordnance Survey (1924) just to the south of the present NCC salt depot on Whorral Bank. The description of the

shafts as 'old' suggests they may already have been redundant by the time the 3rd edition appeared. Not shown on the 2nd edition (1898).

[24] 19th-century coal pit; *SMR no. NZ 28 NW 116; NGR NZ 213875; CH 44*
19th-century colliery on the south side of the present A197 (The Landmark Partnership 1997). Labelled 'Banks Colliery Engine' on the map attached to Northumberland Railway proposals in 1844 (QRU p.63). Marked on the 1st edition Ordnance Survey (1866) as an unnamed group of buildings. No visible remains.

[25] Banks Colliery; *SMR no. NZ 28 NW 56; NGR NZ 21688738; CH 46*
Banks Colliery (site of). The 1st edition Ordnance Survey 6 in (1866) shows only a shaft and perhaps one small building. Had ceased working by 1867 when Pegswood Colliery opened. No visible remains.

[26] Engine house and air shaft (coal); *SMR no. NZ 28 NW 57; NGR NZ 21868747; CH 43*
19th-century coal pit (cf. The Landmark Partnership 1997). 'Engine house and air shaft (coal)' marked on OS 6 inch 1st edition map (1866). No visible remains. It was clearly still operational in the 1866, but evidently redundant by the end of the 19th century - it is labelled 'Old Colliery' on the 2nd edition Ordnance Survey (1898).

[27] 'Old enginehouse' - 19th-century coal pit; *SMR no. NZ 28 NW54; NGR NZ 21768782*
'Old enginehouse' marked on the 1st edition 6 in Ordnance Survey (1866). May represent the site of a small landsale mine operated by Joseph Spearman between 1808-16, under lease to the Duchy of Portland, and probably therefore marks the earliest mining activity in the area (cf. Wardell Armstrong 2000, 5-9; ZSA/4/1/1-35). Labelled 'Pegswood Colliery' on the map attached to Northumberland Railway proposals in 1844 (QRU p.63). Out of operation by 1866 (OS 1st edition). Survives as a rectangular building, c. 7m by 3.5m, with walls 1.3m high plus a spoilheap and connecting trackway to the west.

[28] Pegswood Quarry; *SMR no. NZ 28 NW 55; NGR NZ 21908769*
Quarry marked on the Ordnance Survey 6 inch 1st edition (1866) west of Pegswood village. Facilities included a crane and housing ('Quarry Houses'). Still operational in 1898 (Ordnance Survey 6 inch 2nd edition), but abandonned by 1924 (Ordnance Survey 6 inch 3rd edition).

[29] Smithy; *SMR no. NZ 28 NW 58; NGR NZ 22528745*
Blacksmith's workshop in the centre of Pegswood, labelled 'smithy' on the Ordnance Survey 6 inch 1st edition (1866).

[30] Early enclosure hedge (site of); *NGR NZ 2136 8717*
Ditch and pit revealed by geophysical survey (GeoQuest Associates 2001) and excavation east of the A197 at Whorral Bank. Probably the remains of grubbed-out early enclosure hedge and associated tree bowl, respectively. Hedge perhaps laid in the 16th or early 17th century (cf. William Senior's map of Pegswood township in 1632 - NRO 782/16) and removed in the later 18th-early 19th century when fields were regularised.

[31] Ditch; *NGR NZ 2151 8708*
Isolated length of ditch revealed by geophysical survey (GeoQuest Associates 2001) and excavation between the A197 at Whorral Bank and the East Coast Main Line (The Archaeological Practice 2002c). Contained one sherd of possible Iron Age ceramic material.

[32] Iron Age pits; *NGR NZ 2186 8686*
Two shallow, irregular pits revealed by evaluation excavation just west of the East Coast Main Line (The Archaeological Practice 2002c). Charcoal-rich fills yielded a C14 date of 380 BC +/-10 (1 sigma calibration). The pits may be a result from trees being uprooted during Iron Age 'slash and burn' clearance, implying that Iron Age farmers were making inroads into uncultivated woodland in the area south of Pegswood early in the 4th century BC.

[33] Possible mine adit; *NGR NZ 2234 8667*
Possible mine adit revealed by geophysical survey (GeoQuest Associates 2001) and excavation to the south of the Pegswood, roughly midway between Climbing Tree and Whitefield farms (The Archaeological Practice 2002c). The geophysical survey traced it for a distance of about 100m. Date is uncertain, but was probably dug to exploit the shallow seams to its east, which were later worked in 1957 as part of the Climbing Tree Opencast Coal site.

[34] Slot - pre-medieval fenceline?; *NGR NZ 212 873*
Narrow slot revealed by excavation in the field east of the A197 at Whorral Bank (Archaeological Practice 2002c). Corresponds to linear feature f3 identified by geophysical survey (cf. GeoQuest Associates 2001). Oriented NE-SW. No dateable material recovered, but appears to cut across the gently curving alignment of the medieval ridge and furrow. May represent an early fence line - conceivably associated with the Iron Age/Romano-British settlement at Pegswood Moor.

[35] Ridge and furrow; *NGR NZ 212 873 - NZ 218 868*
Extensive areas of levelled ridge & furrow cultivation features, preserved as infilled furrows in the subsoil. Revealed by geophysical survey (cf. GeoQuest Associates 2001) and excavation (Archaeological Practice 2002c) of the Pegswood Bypass corridor in four fields between the A197 at Whorral Bank and the East Coast Main Line Railway.

[36] Ridge and furrow; *NGR NZ 218 867 - NZ 224 867*
Extensive areas of levelled ridge & furrow cultivation features, preserved as infilled furrows in the subsoil. Revealed by geophysical survey (cf. GeoQuest Associates 2001) and excavation (Archaeological Practice 2002c) of the Pegswood Bypass corridor in two fields between the East Coast Main Line and the western edge of the former Climbing Tree Opencast Coal Site.

6. HISTORICAL SYNTHESIS

6.1 Early Prehistoric

The earliest periods of human activity in northern Britain, including those of Palaeolithic and Mesolithic hunter-gatherers and Neolithic early farmers (up to c.2500BC) are relatively poorly attested within the assessment area. However isolated finds of flints south east of Whitefield farm and south of Bothal (Sites 8 and 9) may reflect the presence of Mesolithic or Neolithic groups. This paucity of evidence is not unexpected given lack of extensive fieldwalking in the area. Limited evidence from the wider environs suggests that this relatively resource-rich area would have been exploited from the earliest times, the undulating coastal lowlands of south-east Northumberland providing a range of wildlife habitats for hunter-gatherer exploitation and good conditions for early farmers.

6.2 Late Prehistoric and Romano-British

Evidence for the nature and density of human activity in the Pegswood area during the later prehistoric and Roman periods consists mainly of cropmarks evident on aerial photographs, supported by recent geophysical survey and excavation. No monuments of this period survive as upstanding earthworks within the assessment area due to the intensity of subsequent, medieval and modern cultivation.

6.2.1 Prehistoric ritual monuments and other features

One small (c. 10m) diameter, circular cropmark (Site 15), which may represent the ring ditch of a prehistoric sepulchral barrow, has recognised through aerial photography and geophysical survey south of Pegswood (Tyne & Wear Museums 1997; Archaeological Services WYAS 1998). Other evidence of prehistoric activity in the area is represented by the complex group of cropmarks on the large promontary site between the River Wansbeck and Whitefield Dene (Site 14). These include pit alignments and a circular, double-ditched enclosure, as well as a square, single-ditched enclosure which may represent an Iron Age/Romano-British farmstead.

6.2.2 Late prehistoric/Romano-British enclosed settlements:

A second rectilinear cropmark similar to that at Site 14 is apparent further to the west (Site 16). Both these cropmarks may be interpreted as discrete rectilinear farmsteads, representative of a class of settlement found throughout the coastal lowlands of north-east England and the Borders during late Iron Age and Romano-British periods (Jobey 1960; 1982, 1-23; Higham 1986, 186-97). The dense distribution of such settlements in the wider environs of Pegswood (especially the area further west, from Pegswood Moor and Whorral Bank to the Cotting Burn, cf. Stage 3 Assessment sites A10-14, A17) is particularly striking and indicates that the assessment area formed part of a landscape which was intensively exploited by later prehistoric and Romano-British communities.

Sites 14 and 16, like very many of their counterparts, appear to form discrete settlements (though probably overlying features of earlier periods in the case of Site 14), suggesting a pattern of dispersed farmsteads not unlike that of modern agricultural settlement. However, more complex clusters of sites are evident further west, at Silver Hill/Kater Dene and Warreners House, on the basis of aerial photographic evidence (SMR NZ 18 NE 39/64, 57; The Landmark Partnership 1997: sites A10/14, A13), and most notably the example recently identified and excavated in the extension to the Pegwood Moor Farm opencast site (centred at NZ 201882). This site is particularly extensive and

complex, with three major phases of occupation, probably stretching over a considerable period, and is evidently of high regional significance. As knowledge of these sites increases it is likely that more variation and complexity in the form and hierarchy of settlement will emerge.

The distribution of known settlements clusters along the banks of the Wansbeck (both north and south) and its major tributary streams, the Cotting Burn, Kater Dene and How Burn. If this proximity to watercourses is a significant determining factor in their location, the probability of finding similar sites along the route of the bypass, which runs some distance to the north of the Wansbeck, would be correspondingly reduced.

However, in revealing a ditch containing possible Iron Age ceramic material (Site 31) and two shallow, irregular pits with charcoal-rich fills dated to 380 BC +/-10 (Site 32), the evaluation programme has demonstrated the survival of late prehistoric features within the bypass corridor. These features may be interpreted as remnants of an outlying field boundary and clearance activity associated either with the extensive settlement complex at Pegswood Moor to the west or with Site 16 to the south. The shallow pit features are most convincingly interpreted as the result of trees being uprooted during Iron Age 'slash and burn' clearance. The C14 date obtained from the pit fills would suggest that Iron Age farmers made began to make inroads into uncultivated woodland in the area south of Pegswood early in the 4th century BC, a finding which may in due course be compared with the dates obtained from the Pegswood Moor settlement site (see 4.3.1 above and Archaeological Practice 2002c).

6.3 Medieval

6.3.1 Settlement Pattern

Relatively little is known of the early medieval settlement pattern along the Wansbeck and the only evidence which sheds any specific light on the history of the assessment area during that period is the discovery of several tenth- and eleventh-century cross shafts and grave markers at Bothal (Cramp 1984, 165-7, pls.159-61), suggesting that the latter site was already the parochical centre of the district before the Conquest. However, from the very end of the 11th and beginning of the 12th centuries, when the Norman baronies and their associated ecclesiatical institutions were implanted in Northumberland, a settlement pattern very different to that seen in the Iron Age and Romano-British period becomes apparent. The principal centres of power and authority, namely the baronial castles at Mitford, Morpeth and Bothal (Site 1), the associated boroughs of Morpeth and Mitford, and the major ecclesiatical institutions such as the Cistercian Abbey of Newminster and the Hospital of St Leonards (at Spital Hill, Mitford), plus the lesser ecclesiastical sites of Bothal parish church and the later medieval Lady Chapel (Site 2), were all located in the valley beside the river. The density of such important sites in the short stretch of the river between Mitford and Bothal demonstrates the continued importance of this area within southern Northumberland.

The location of these baronial and other central places may partly be explained by a desire to avoid the fertile, relatively flat lands on either side of the valley, lands which provided the agricultural resources necessary to sustain the feudal and ecclesiatical hierarchies. The lesser settlements, which were subordinated to the baronies, were distributed more evenly throughout the flat agricultural land, but took the form of nucleated villages or hamlets rather than the mostly dispersed farmsteads of the Iron Age and Romano-British era. Villages such as Pegswood (known as Pegsworth up until the 19th century) formed distinct communities, or townships, each with defined territories containing arable fields meadows and rough grazing (moor) which they exploited. The township of Pegswood was incorporated in the barony of Bothal, held by one lineage of the Bertram family.

6.3.2 Whitefield

In the Stage 2 Assessment it was been suggested that there might be a second village site in the area, at Whitefield, now reduced to a single farm (Site 12a). The suggestion was derived from the list of possible deserted medieval villages (DMVs) in Northumberland compiled by Godwin (1971; cf. Clack and Gosling 1975, Gazetteer 129). Subsequently, the Stage 3 Assessment concluded that the evidence for a DMV at Whitefield could not be substantiated, questioning the reliability of Godwin's listing and arguing that both the site's existence and location must be regarded as unproven. However reconsideration of documentary evidence cited by Hodgson (1832), suggests that the case for a medieval settlement at Whitefield is stronger than previously supposed.

Several medieval documents link a township and settlement of 'Whetworth' or 'Weteworth' with the Barony of Bothal. These references have been collated by Hodgson (1832, 165-6) and range in date between 1240, when there were 14 soccage tenants there (Hodgson 1832, 123), and 1544, when the vill and territory of Whetworth was listed along with Bothal manor and castle in the *inquisition post mortem* of Robert Lord Ogle's properties. It is clear from these sources that Whetworth was one of the principal township settlements within the Bothal barony, along with Pegswood, Ashington (Essenden), Bothal etc. Hodgson himself tentatively located the settlement at Coney Garth, a farmstead located 1km north east of Bothal, but Whitefield is clearly a more plausible candidate on placename grounds. The similarity of the prefixes, Wete-, Whet- and White-, is evident and represents a straightforward toponymic evolution over time. Unfortunately Whitefield is excluded from William Senior's detailed map of 1632, which covers Pegswood, Longhirst and Hebron townships, but not Bothal Desmesne, in which Whitefield is situated.

There are no surface indications of a medieval settlement at Whitefield although ridge and furrow has been observed in the field immediately north west of the farm. Aerial photography (cf. 58/RAF/2625/19-20), geophysical survey (GeoQuest Associates 2001) and excavation (The Archaeological Practice 2002c) revealed a complex group of features north of Whitefield Farm, comprising a small mid-19th century reservoir, and a palimpsest of possible ridge and furrow, drainage ditches and opencast colliery trackways (Site 12b), most of which can confidently be ascribed a relatively modern date. No medieval pottery was found in the excavation at Whitefield.

6.3.3 Ridge and furrow cultivation

The area to the south of Pegswood, which is bisected by the bypass corridor, clearly formed part of the township's open ploughfields during the medieval and early modern periods. The geophysical survey mapped an extensive system of flattened ridge and furrow (f5-6, f10, f17-18), the product of earlier ploughing which in turn had been levelled by modern arable cultivation resulting in alternate rows of soil-filled furrows and truncated ridges (GeoQuest Associates 2001; cf. Sites 34-5). In plotting the different alignments of the ridge and furrow the mapping revealed the extent of different ploughfields. In the western survey block, to the west of the East Coast Main Line, the division between a field of east-west oriented ridge and furrow and one with a north-south aligned pattern is particularly clear, the boundary between the two being marked by an open strip, or headland, which was roughly followed by a later hedgeline (f9). The mapped ridge and furrow does not correlate all that well with the field pattern shown on the earliest detailed map of area, surveyed by William Senior for the Earl of Newcastle in 1632 (NRO 782/16), and there is good reason to believe that the system of open fields was already breaking down under the pressure of piecemeal enclosure by the time that survey was being drawn up.

6.4 Post Medieval and Modern

6.4.1 Enclosure

William Senior's survey of Pegswood, Longhirst and Hebron Townships shows a landscape in transition. The names of many of the fields he planned emphasise that the process of privately enclosing the previously open arable fields and common was already underway - Cow Close and White Close, Great East Close and Little East Close, Quarry Close, and Wester Close to the north, east, south and west of the village respectively. Most of the field boundaries shown by Senior can still be located, at least roughly, although some have evidently been realigned and straightened during the intervening centuries. To the south east, the township boundary, which runs roughly mid-way between the village and Whitefield Farm, does not correspond to any field boundary recorded from the 1st edition Ordnance Survey (1866) onwards, suggesting the reorganisation of fields in this area has been more drastic.

The process of straightening and realignment has been demonstrated by excavation in the case of one field boundary on Senior's map. Situated WSW of the village, this boundary probably corresponds to ditch 209 in evaluation trench 2 and geophysical survey feature f4 (Site 30). On the map it is shown following a roughly N-S orientation, separating 'West Field' from 'Quarry Close', but its course is less regular than the present hedge line, with West Field appearing to bulge out further westward than it does today. No hedge was evident in this position on the first Ordnance Survey edition, which shows the present field boundary to the east of 209 instead. Linear cut 209 thus marks the late 18th- or early 19th-century grubbing out of an early enclosure hedge line.

6.4.2 Settlement Pattern

If Senior's map reveals that Pegswood had begun the change to a post-medieval field system, equally it shows a township that was still medieval in its nucleated settlement pattern and in the apparent predominance accorded to agriculture as the principal resource and means of livelihood. Unfortunately, the copy of the corresponding estate survey, undertaken for the Earl of Oxford in 1724, which was formerly held in Northumberland Record Office has been lost. Consequently the progress which processes such as field division and enclosure and the creation of a series of dispersed, planned farms had made in the intervening century cannot be charted in detail. Whitefield, Climbing Tree and Pegswood Moor farms had all been established by the time Armstrong published his map of Northumberland in 1769, but the road layout around Pegswood still appears noticeably less straight and regular on Armstrong's map than it does on the maps produced by Fryer in 1820 and Greenwood in 1828. This most likely reflects an actual straightening and realignment of the road network in the intervening period, and may be associated with a remodelling of the field enclosures which transformed the slightly irregular boundaries evident on William Senior's map into the straight-sided enclosures of today. The present field layout had certainly been established by 1827 when Climbing Tree, Whitefield and Pegswood Fold farms, with all their fields, were planned in detail. Therafter there is abundant mapping for the area in the form of the Tithe map, the plans drawn up for various railway schemes and the successive Ordnance Survey series. It is clear that by the early 19th century (and probably by the mid 18th) these tenanted farms were the principal means by which a landowner such as the Duke of Portland exploited his vast estate centred on Bothal (which included all of Pegswood and Bothal Desmesne townships).

The combined map evidence shows that the village of Pegswood comprised an agglomeration of three farms, Pegswood North, Pegswood East and Pegswood Fold, in the early-mid 19th century, their holdings embracing the fields to the north and east and to the immediate south of the settlement. The land further to the south and to the west was divided between three dispersed farmsteads, Whitefield, Climbing Tree and Cookswell House, which were situated to the south east, south west and west of Pegswood, respectively. The village itself also accomodated artisan services such as

smithing (cf. Site 29) and a population of farm laborourers in a string of cottages. As the 19th century wore on, however, it was the workers in the increasing number of coal mines in the district who were to become the most important demographic component. The steady expansion of the village in response to population growth and the demands of the coal-mining industry can be charted in the successive editions of the Ordnance Survey.

6.4.3 Coal Mining

The earliest coal mining in the area was probably directed towards exploiting the seams which outcropped on the steep valley sides of the River Wansbeck and its tributaries (Scott Doherty Associates 2001, fig. 2; cf. Sites 20-21). The distribution pattern of drift mines in the Pegswood environs known hitherto conforms to this pattern. Technological developments of the late 18th century onwards enabled deeper seams to be exploited and four sites associated with this activity are marked on the 1st edition Ordnance Survey to the west of Pegswood, including Banks Colliery (Site 25), an engine house and air shaft (coal) (Site 26) beside Cookswell House, the 'Old Enginehouse' to the north west (Site 27) and an unnamed group of buildings on the south side of the A197, further to the west (Site 24 - labelled 'Banks Colliery Engine' on QRU p.63 in 1844).

The history of 19th century coal exploitation represented by these sites can be tentatively reconstructed from documentary and cartographic evidence. It has been suggested that the 'old enginehouse' [27] may represent the site of a small landsale mine operated by Joseph Spearman between 1808-16, under lease to the Duchy of Portland, and probably therefore marks the earliest mining activity in the area (cf. Wardell Armstrong 2000, 5-9). The lease was taken over by a consortium in 1825 but was less productive than expected and by 1826-7 the coal was described as 'worked out in the district' (ZSA/4/1/1-35). However this site is labelled 'Pegswood Colliery' on the map attached to Northumberland Railway proposals in 1844 (QRU p.63), and was evidently still in operation at that date. The mine had certainly gone out of operation by 1866 (OS 1st edition). A new colliery had been sunk to replace it, though its precise location is uncertain. It may however be represented by Site 26. This complex is labelled 'Engine House' and 'Air Shaft (Coal)' on the 1st edition Ordnance Survey and therefore was clearly still operational in the 1866. It had evidently become redundant in its turn by the time the 2nd edition Ordnance Survey (1898) was published, since it figures there as an 'Old Colliery'.

Also operating in the first half of the 19th century at the same time as the above sites was Banks Colliery [25]. This ceased production in 1867 due to the opening of Pegswood Colliery to the east of the village. Indeed the 1st edition Ordnance Survey (1866) shows appears to mark only a shaft and perhaps one small building, suggesting it had already stopped working. It may have been associated with a second site to the north west at NZ 213875 which is labelled 'Banks Colliery Engine' on the map attached to Northumberland Railway proposals in 1844 (QRU p.63) [24]. The mine's workforce resided at Banks Cottages or Banks-houses, just east of Quarry Bank (cf. Hodgson 1832, 166-7). These cottages are shown on the 1st edition Ordnance Survey, but only one building is marked on the 2nd edition and none on the 3rd edition (1924),suggesting that the cottages were gradually abandoned as the workers moved to Pegswood following the opening of the new colliery there.

The new Pegswood Colliery was built at the east end of the village, on the north side of the East Coast Main Line. It does not figure on the 1st edition Ordnance Survey (1866), but was clearly in full swing by the time the 2nd edition was completed (1898), with surrounding housing terraces for the workforce and adjacent railway sidings enabling the coal to be transported efficiently. It is clear that the construction of the Newcastle-Berwick railway in 1847 (cf. Site 4 and QRU p 58a), was a major influence in its siting.

The 3rd edition Ordnance Survey (1924) also marks a couple of 'old shafts' with adjacent buildings and a spoil heap just to the south of the present NCC salt depot on Whorral Bank (Site 23). The description of the shafts as 'old' suggests they may already have been redundant by the time the 3rd edition appeared, but the complex does not appear on any earlier maps and presumably therefore had only a short life at the beginning of the 20th century.

A further, possibly related site (Site 33) was revealed to the south of the Pegswood by the geophysical investigation conducted as part of this assessment phase. An intense positive anomaly (f16) was recorded in the central survey block, roughly midway between Climbing Tree and Whitefield farms. It was traced for a distance of about 100m and interpreted as a mine adit, an identification tentatively supported by the excavation results (see above Section 4). Its date is uncertain, but it was probably dug to exploit the shallow seams to its east, which were later worked in 1957 as part of the Climbing Tree Opencast Coal site.

In the 20th century Pegswood has steadily grown with the construction of new housing and road links around the core of the old village, a process which can be charted in successive Ordnance Survey editions. A final radical change in the area has been the demise of the coal industry itself (in all but its opencast form) in recent decades, a process which has seen the removal of such apparently permanent landmarks as the waste tips to the north east of the village.

7. CONCLUSIONS

The assessment of both discrete and more extensive historical landscape components reveals that the area to the south of Pegswood has been the focus of intensive human activity, including settlement, agricultural cultivation and coal mining, since later prehistory.

7.1 Preservation of Cultural Features and Deposits

The evaluation results confirmed that the long history of arable cultivation evident in the area south of Pegswood, from the ridge and furrow ploughing of the medieval period right up to the present day, had truncated the remains of earlier periods. It is likely this has removed any surfaces, deposits and shallow features, leaving only the lower sections of features cut more deeply into the subsoil. This might also account for the discontinuous or isolated survival of some of the ditched features, i.e. the remainder of these features has probably been ploughed out completely. The preservation along the Pegswood Bypass corridor may be compared with that reported at Pegswood Moor Opencast Coal Site to the west of Whorral Bank, during excavation of the IA/RB settlement there. As its name suggests this area formerly represented the rough common grazing for Pegswood township. As a consequence it has been subjected to arable cultivation for a shorter period. Even so there had been extensive plough damage to the site, resulting in the horizontal truncation of archaeological remains with only the lower portions of cut features surviving (Proctor 2001, 36).

In conclusion, there is nothing in the assessment and evaluation findings to indicate that the corridor contains archaeological remains of sufficient significance to warrant mitigation by avoidance and preservation *in situ*.

7.2 Direct Impacts

1. Only one site [12] catalogued during the previous phases of assessment work and listed in the SMR (NZ 28 NW 27 & 60) will be directly impacted by construction of the Pegswood Bypass (see direct impact 3.ii below).

2. No site in the wider assessment area will be significantly visually impacted. Most of the sites in the immediate vicinity are sub-surface features.

3. Several features identified and excavated during the evaluation phase will be impacted by the construction of the bypass. These include:

    i. Two features of probable Iron Age date, comprising a ditch containing possible Iron Age ceramic material [Site 31] and a group of pits containing charcoal dated to 380 BC +/-10, probably the scars left by the uprooting of tree stumps during slash and burn clearance activity [32].

    ii. A complex group of features north of Whitefield Farm, comprising a small reservoir, and a palimpsest of possible ridge and furrow, drainage ditches and trackways, all levelled or infilled during the modern era [Site 12b]. Most of these features are probably relatively

modern, but some may conceivably be associated with the medieval township settlement of 'Whetworth' mentioned in documentary sources relating to the Barony of Bothal.

iii. Other features of lesser archaeological significance, including the remnants of a grubbed-out early enclosure hedge (16th-17th century?) [30], a suggested pre-medieval fenceline [34] and a possible mine adit [33].

Of the more significant features, the Iron Age remains have been sufficiently investigated during the evaluation phase to obviate the need for further mitigatory excavation.

7.3 Indirect Impacts

1. In reducing the amount of traffic passing through the centre of Pegswood, the bypass should have a minor, positive environmental impact on the listed buildings beside the present A197 - a milepost, Cookswell House and Pegswood North Farm [Sites 3, 5-6].

8. RECOMMENDATIONS

The following archaeological work is required in the Pegswood Bypass corridor to further evaluate and mitigate the cultural heritage impact of the proposed road. These recommendations remain subject to consideration by the County Archaeologist.

1. Archaeological monitoring should be undertaken during construction operations and borrow-pitting where the bypass crosses the slightly higher ground around Site 31. After removal of the topsoil overburden, the surface of the subsoil should be examined by a competent professional archaeologist to etablish the presence or absence of archaeological remains. Should examination reveal remains of archaeological significance an adequate interval for investigation and recording of any features will be required.

2. Archaeological monitoring should be undertaken during construction operations at the west end of the bypass, in the field adjacent to the A197 at Whorral Bank. This would aim to record the full length of linear slot Site 34 and any related features, following the removal of topsoil overburden, and to recover material which might provide a date for this feature.

3. It is recommended that archaeological monitoring should be undertaken during construction operations in the vicinity of Site 12b, north of Whitefield Farm, towards the east end of the proposed scheme.

4. Appropriate steps should be taken to ensure that Site 3, the grade II listed, 19th-century milepost beside the A197, is not damaged during construction operations. The milepost lies in very close proximity to the point where the new link to the proposed Whorral Bank roundabout is projected to diverge from the present course of the A197, west of Pegswood, although no direct impact is indicated. Protective measures which should be considered include the erection of fencing around the milepost before construction works commence and clear identification of the structure, both *in situ* and on operational drawings.

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Figure 1: *Location of the Pegswood Bypass, showing the cultural heritage assessment area (shaded)*

Figure: 2 *William Senior's plan of Pegswood, Longhirst & Hebron Townships, 1632*

Figure 3: *Extract from Armstrong's Map of the County of Northumberland, 1769*

Figure 4: *Extract from Fryer's Map of the County of Northumberland, 1820*

Figure5: *Extract from Greenwood's Map of the County of Northumberland, 1828*

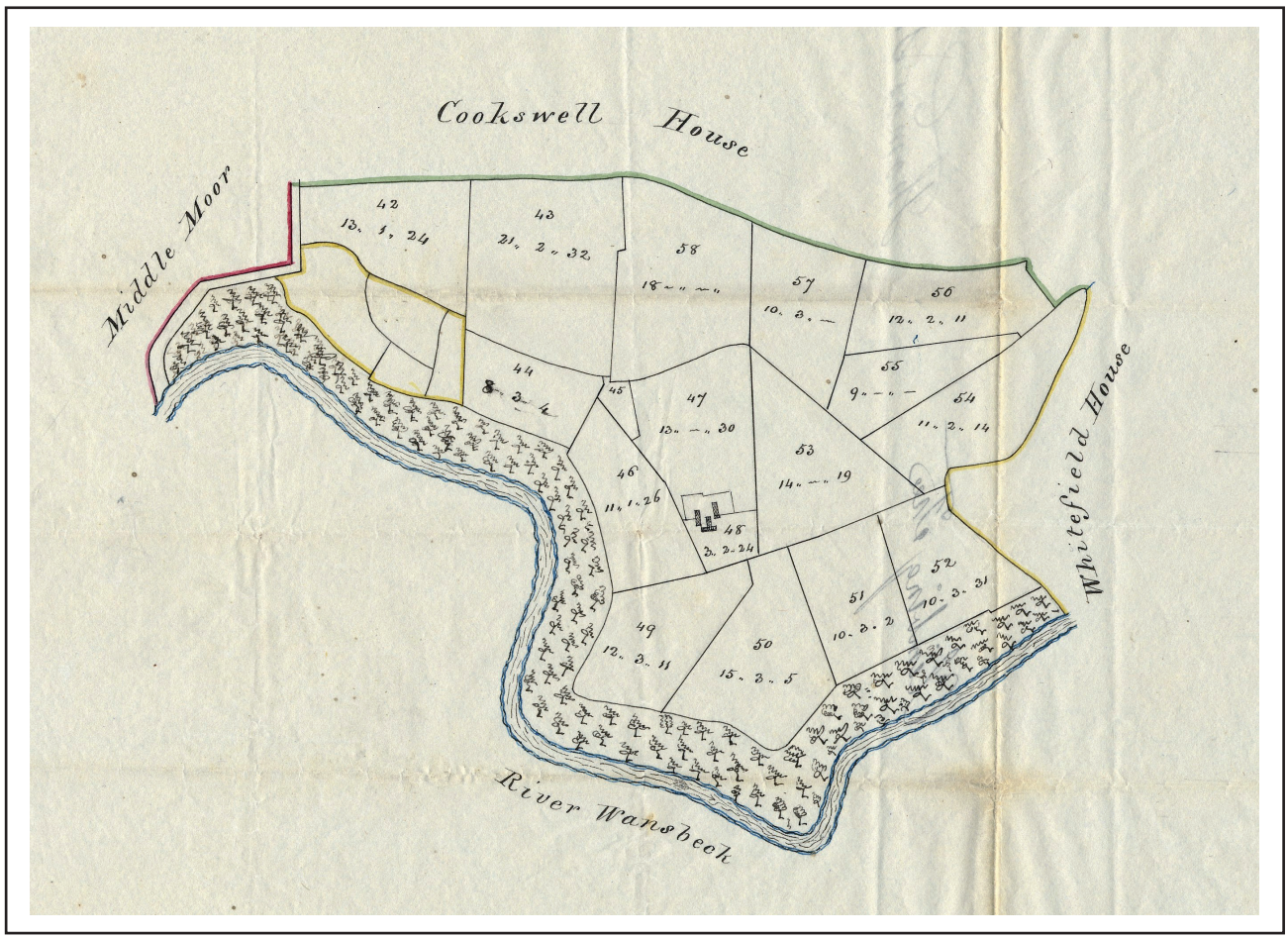


Figure 6: *Plans of Climbing Tree Farm, 1827*

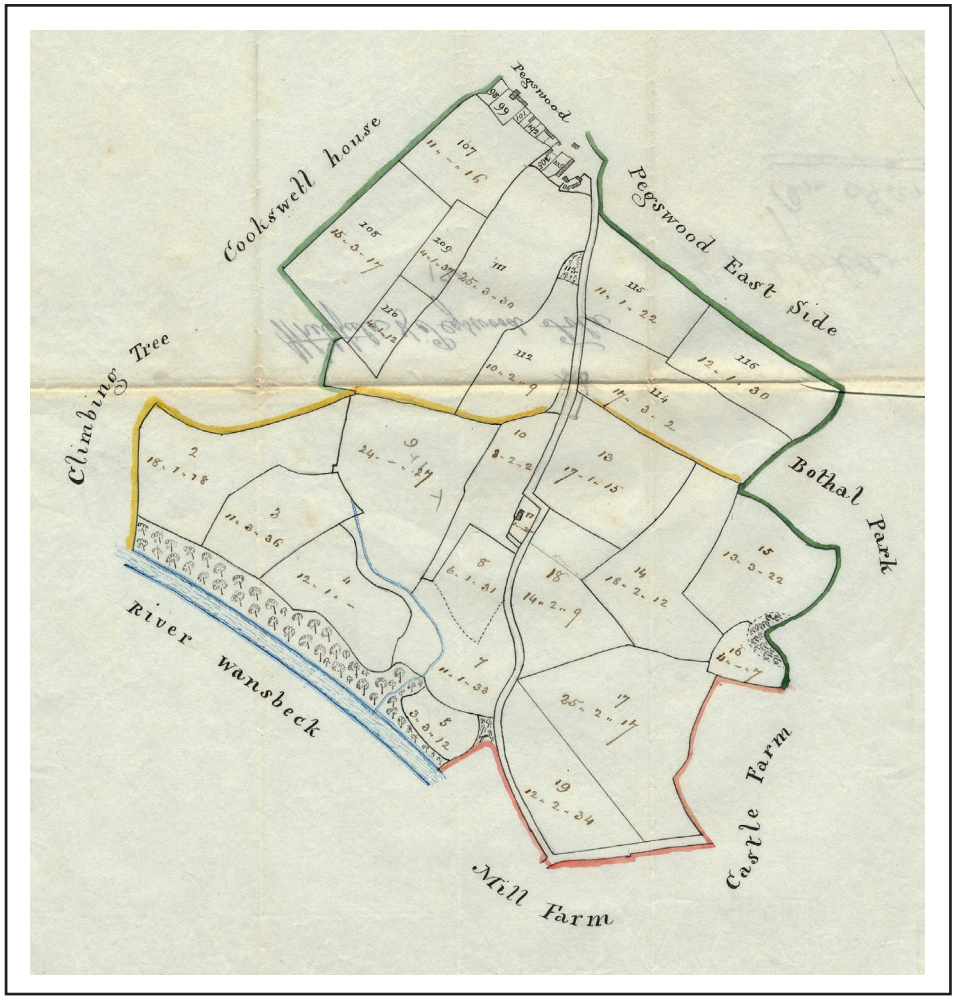


Figure 7: *Plans of Whitfield and Pegswood Fold Farms, 1827*

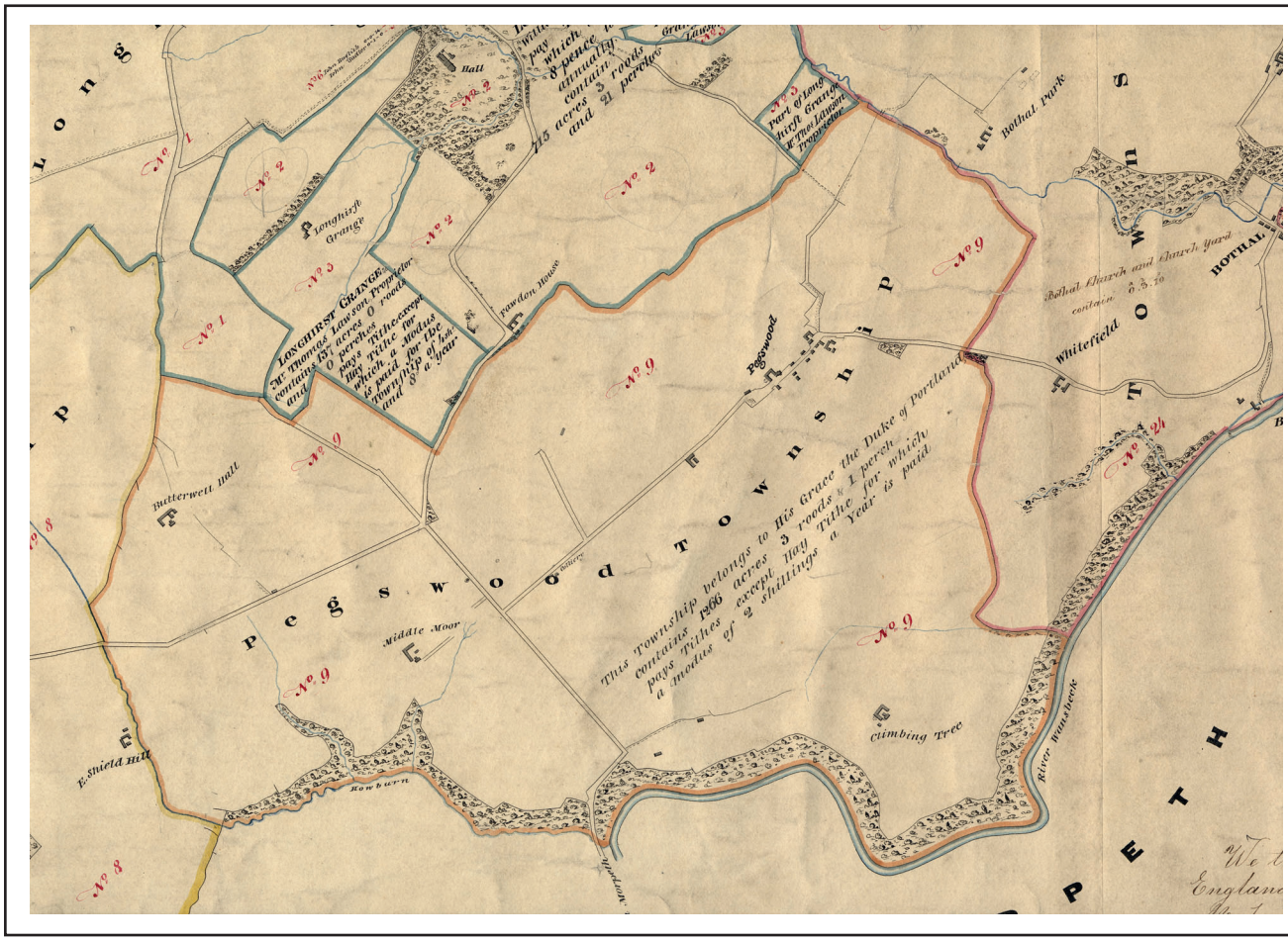


Figure 8: *Tithe Map for Bothal Desmesne, 1837*

Figure 9: *Plan of the Newcastle & Berwick Railway Plan, 1844*

Figure 10: *Plan of the Northumberland Railway, 1844*

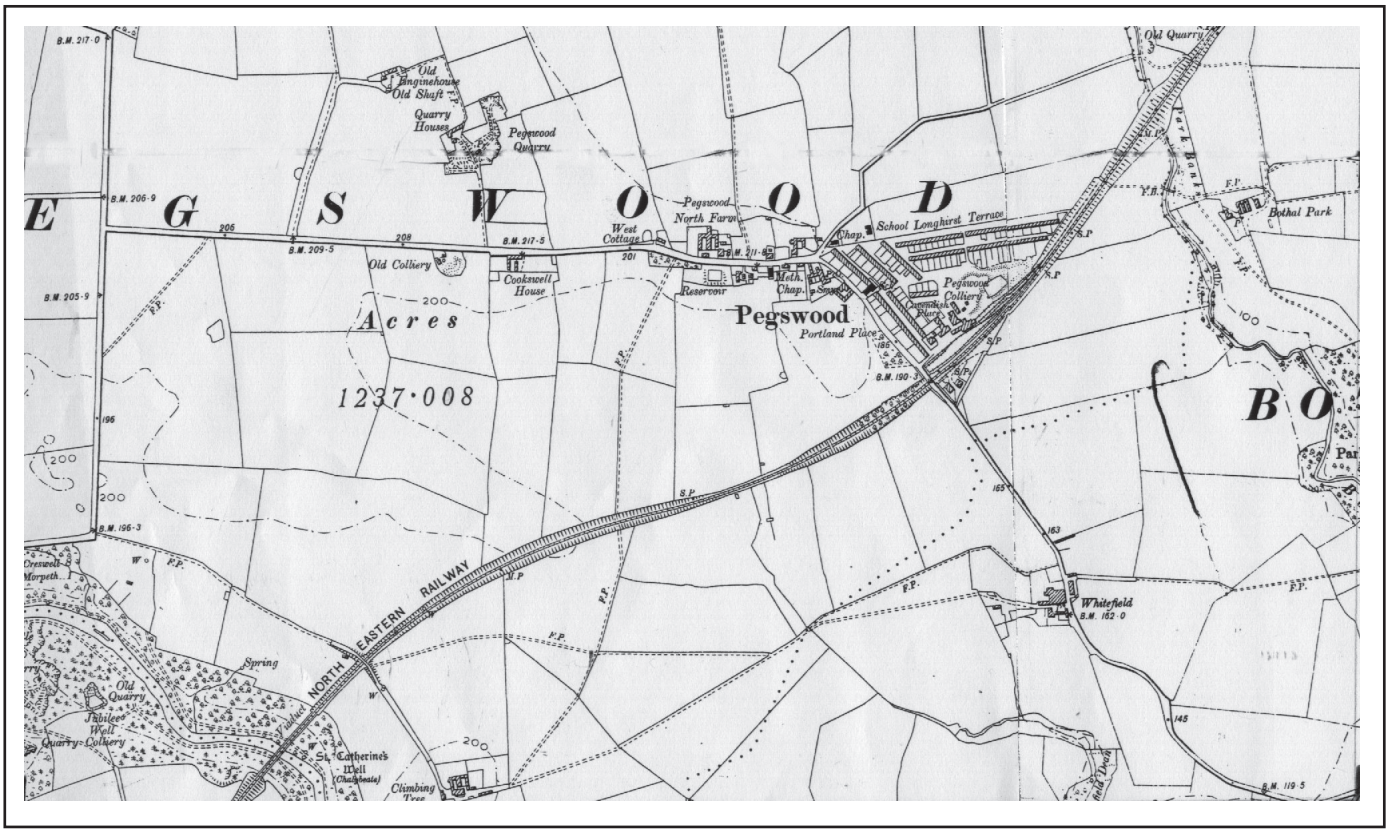


Figure 11: *Extract from Second Edition Ordnance Survey, 1898, 6" sheet LXIV*

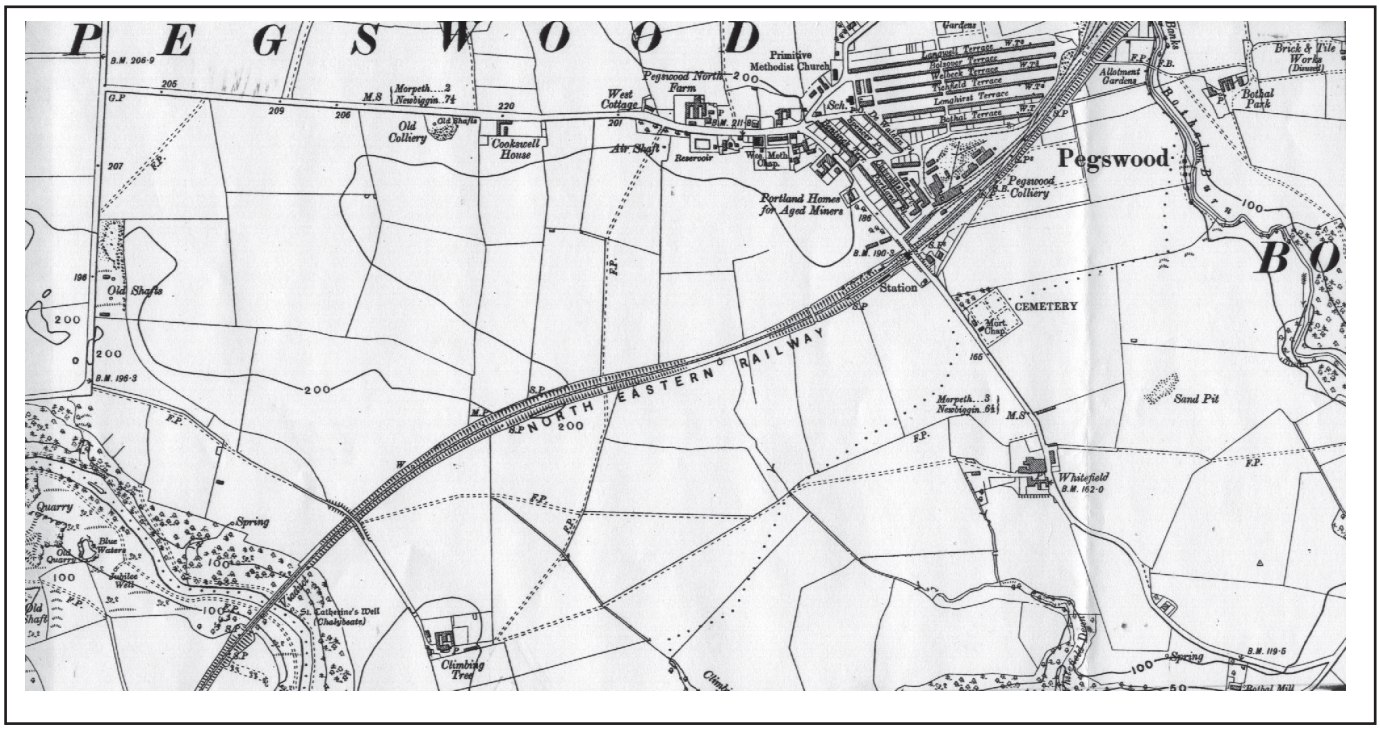


Figure 12: *Extract from Third Edition Ordnance Survey, 1924, 6" Sheet LXIX*

Figure 13: *Extract from Fourth Edition Ordnance Survey, 1938, 6" Sheet LXIX*

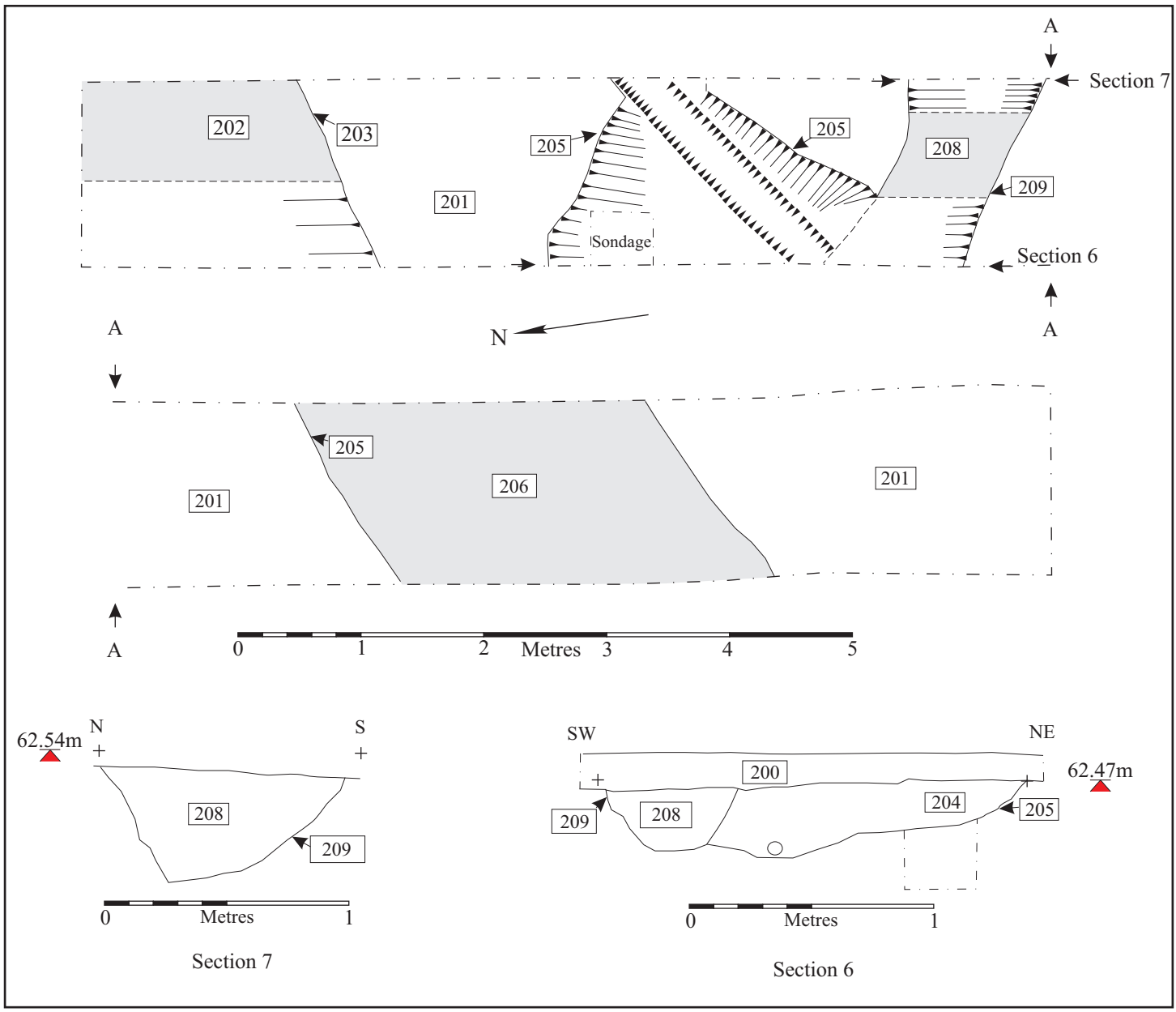


Figure 17: *Plan and sections of evaluation trench 2*

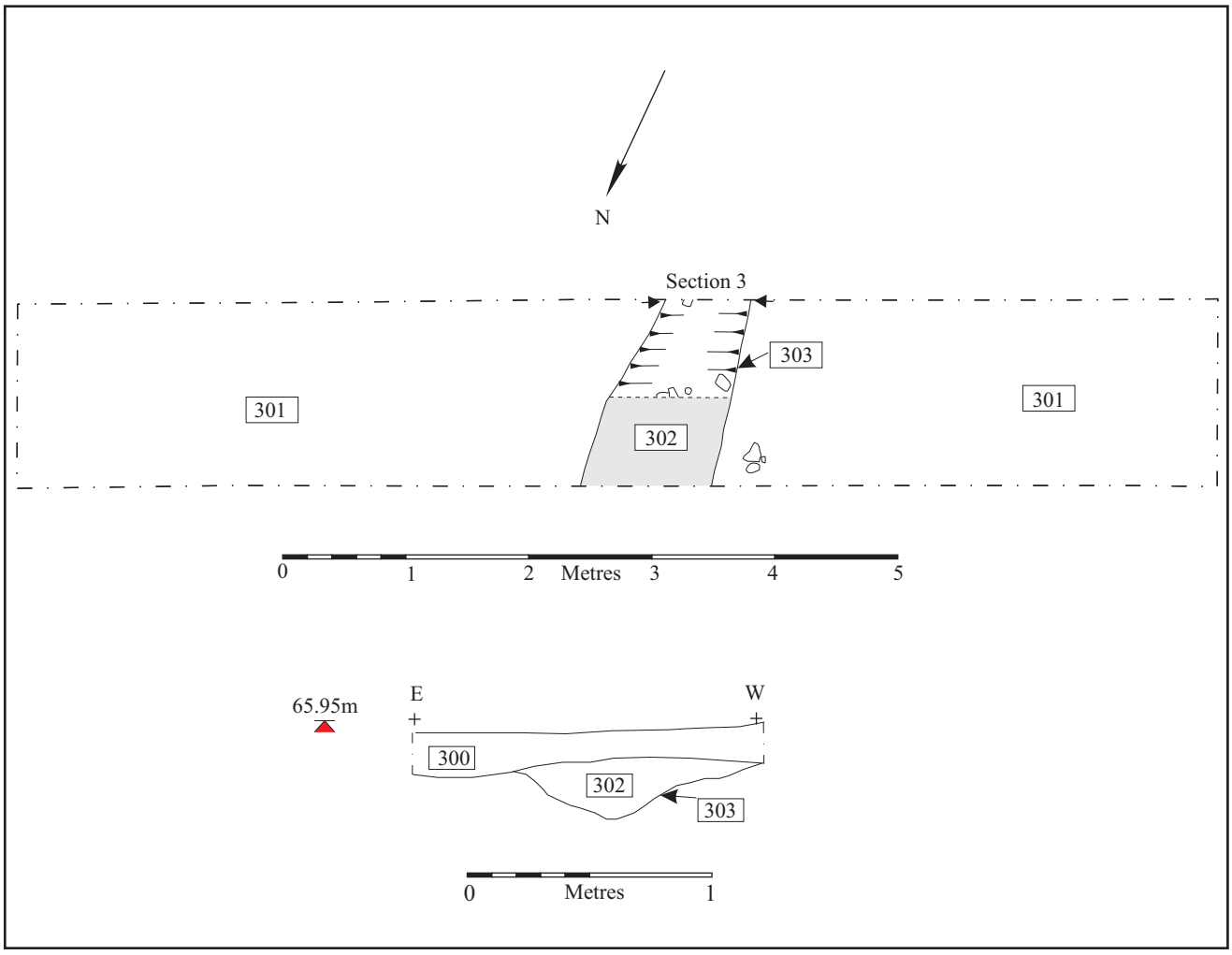
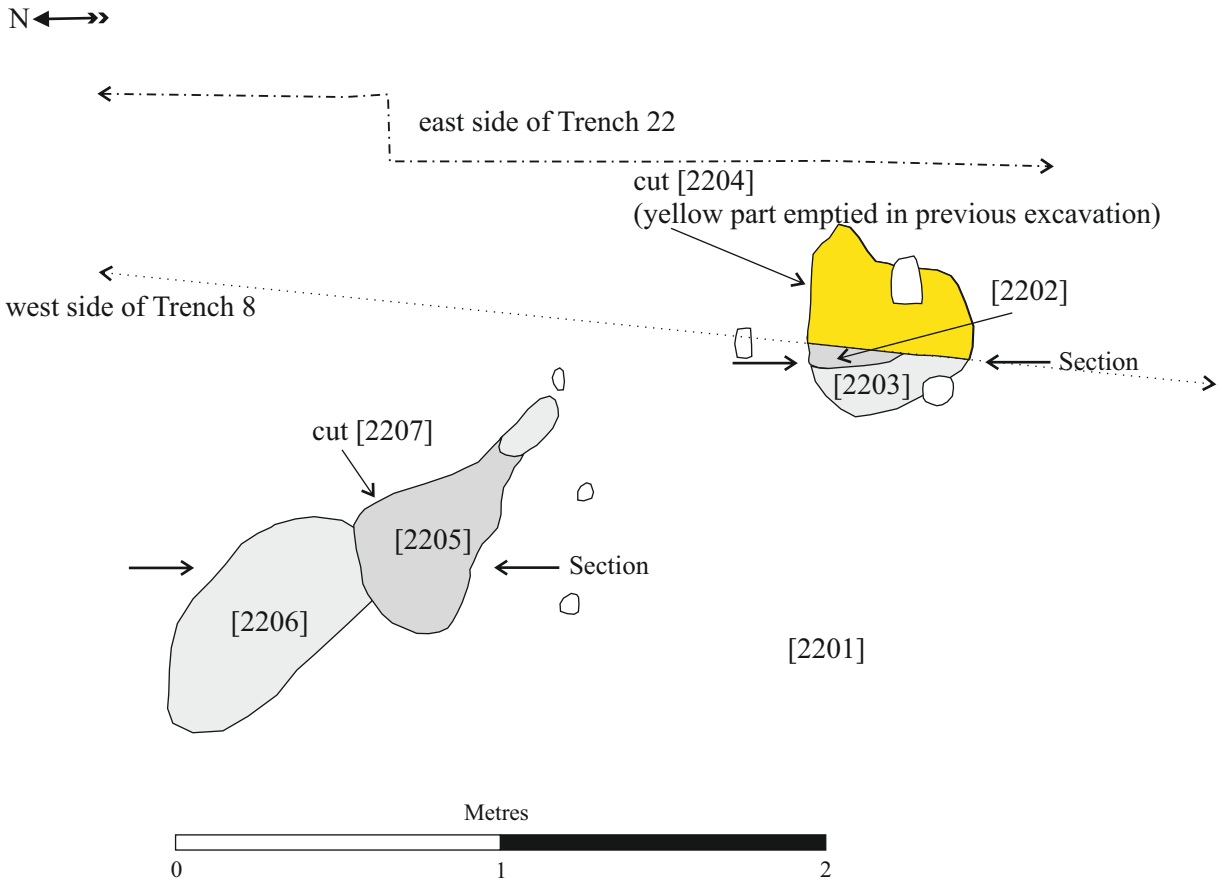
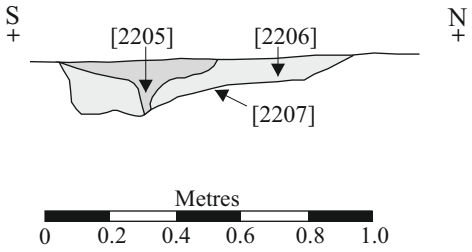
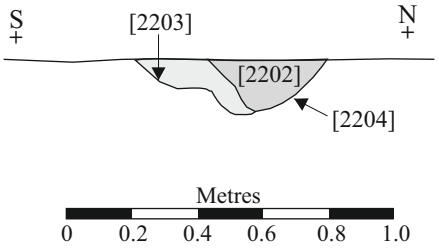


Figure 18: *Plan and section of evaluation trench 3*



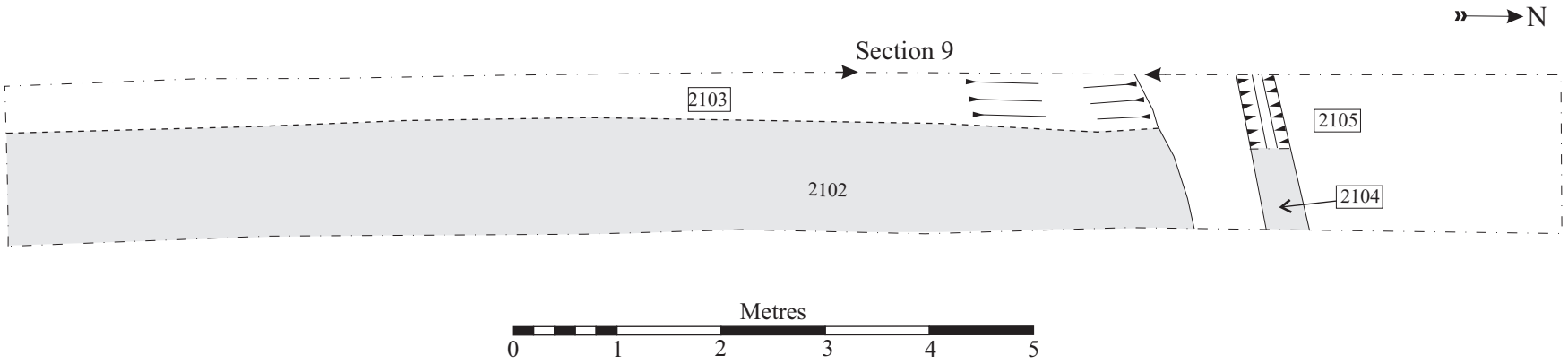


East facing section of cut [2207]



East facing section of cut [2204]

Figure 19: *Plan and sections of iron age pit features in evaluation trench 22*



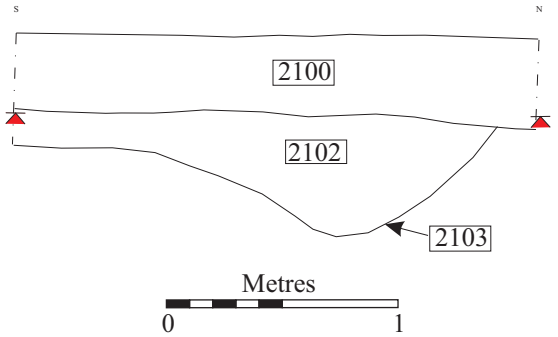


Figure 20: *Plan and section of evaluation trench 21*

East face of section 9 through [2103]

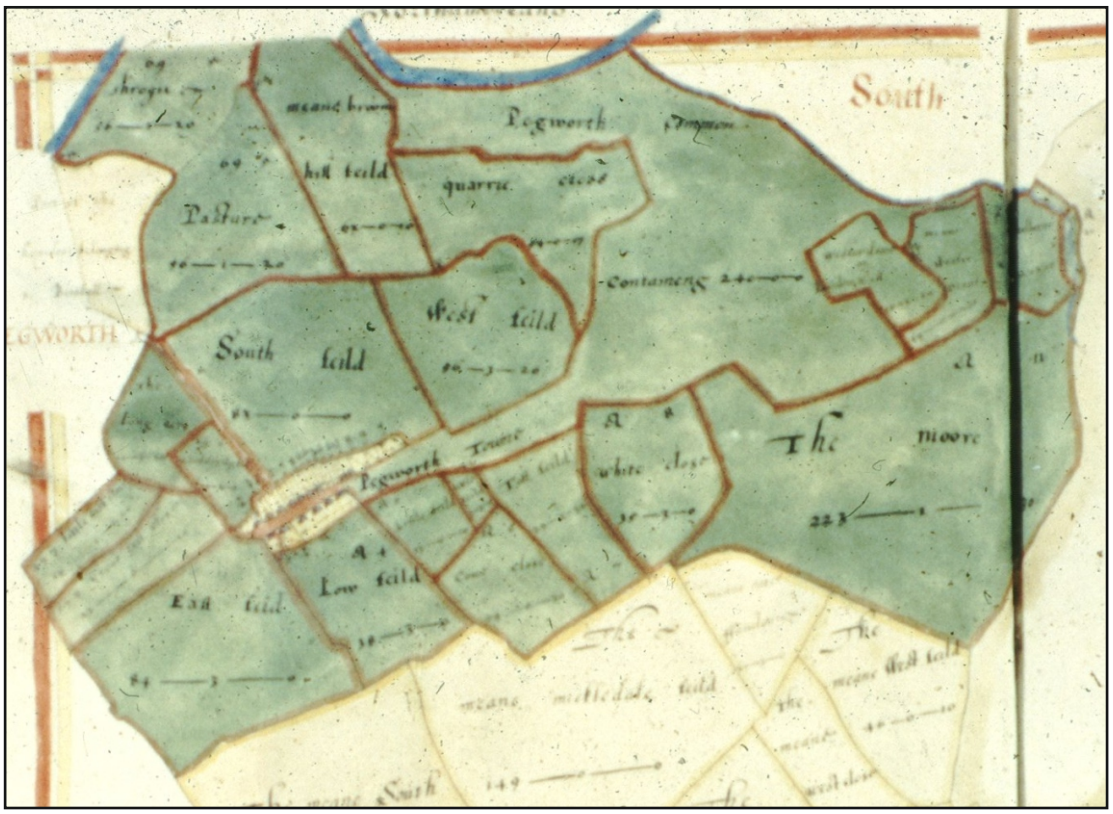


Figure 22: *Detailed extract from William Senior's Map (1632), showing Pegswood Township*

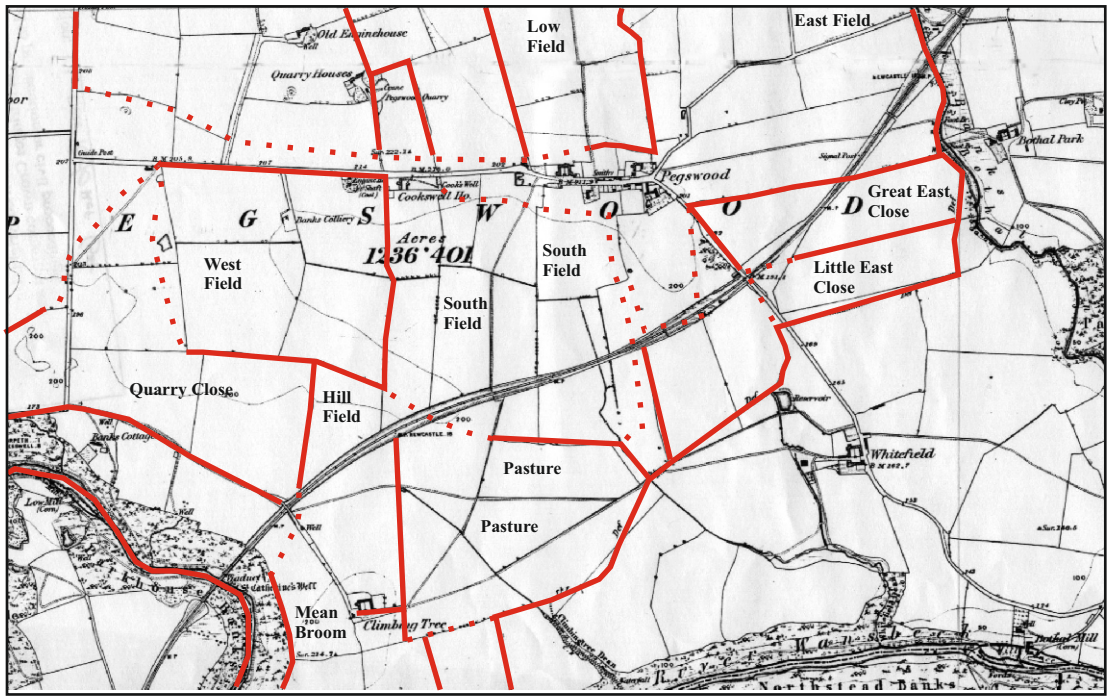


Figure 23: *Extract from First Edition Ordnance Survey, 1866, 6" Sheet LXIV, (field boundaries shown on William Senior's map of 1632 highlighted in red)*

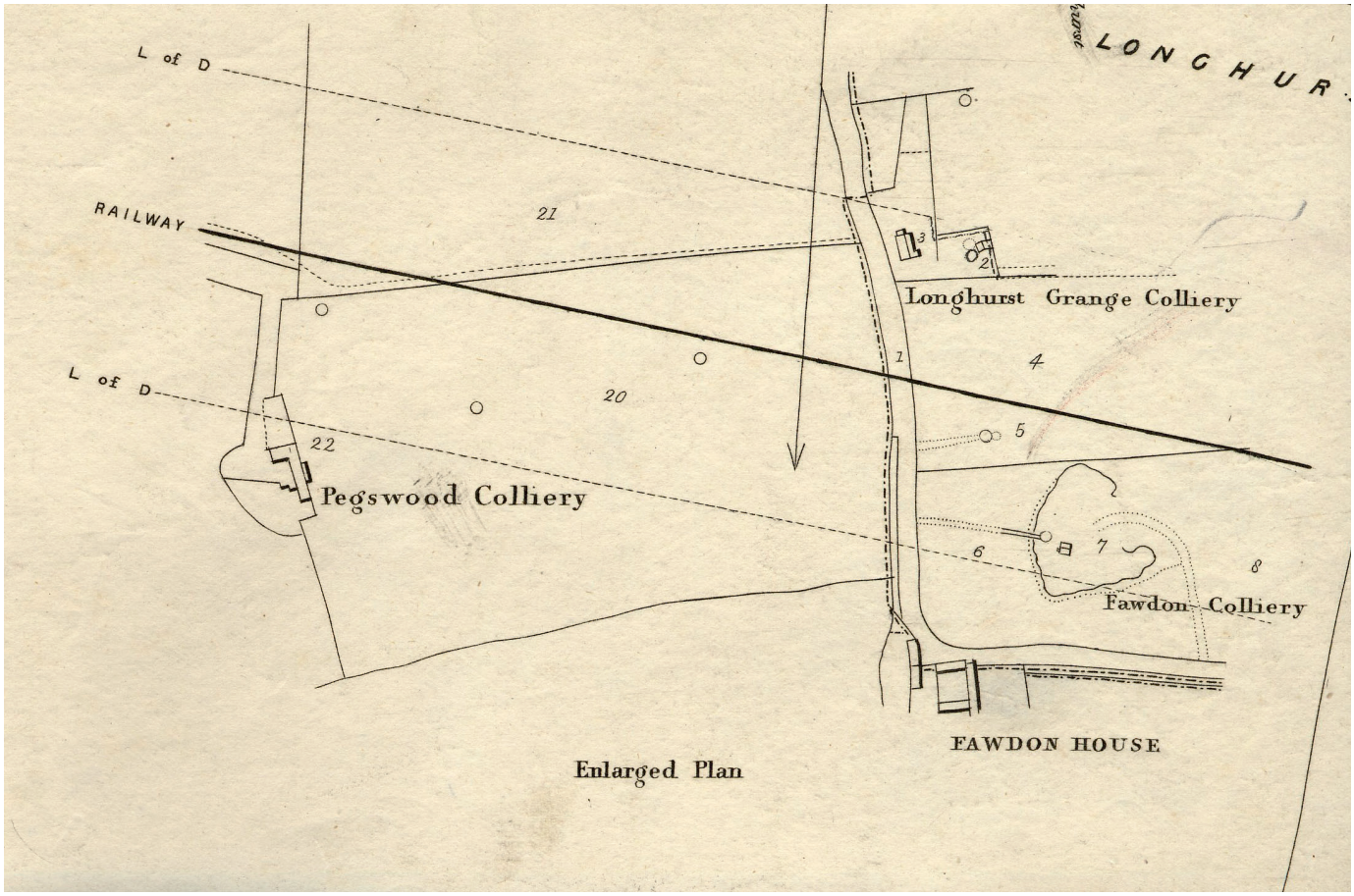


Figure 24: *Enlarged detail from the plan of the Newcastle & Berwick Railway, 1844, showing coal mining installations at Pegswood*

Plate 1: *View of Climbing Tree Farm from the East*

Plate 2: *View of Whitefield Farm from the North*

Plate 3: *East end of the bypass corridor looking West, with Whitefield Farm in the left background*

Plate 4: *Western section of the bypass corridor looking north west*

Plate 5: *Trench 2, looking North, showing features 209 & 205*
(Possible grubbed out hedge line and tree - Site 30)

Plate 6: South *end of trench 1, showing slot 105 (Site 34)*

Plate 7: *Trench 3, looking North, showing ditch 303 (Site 31)*

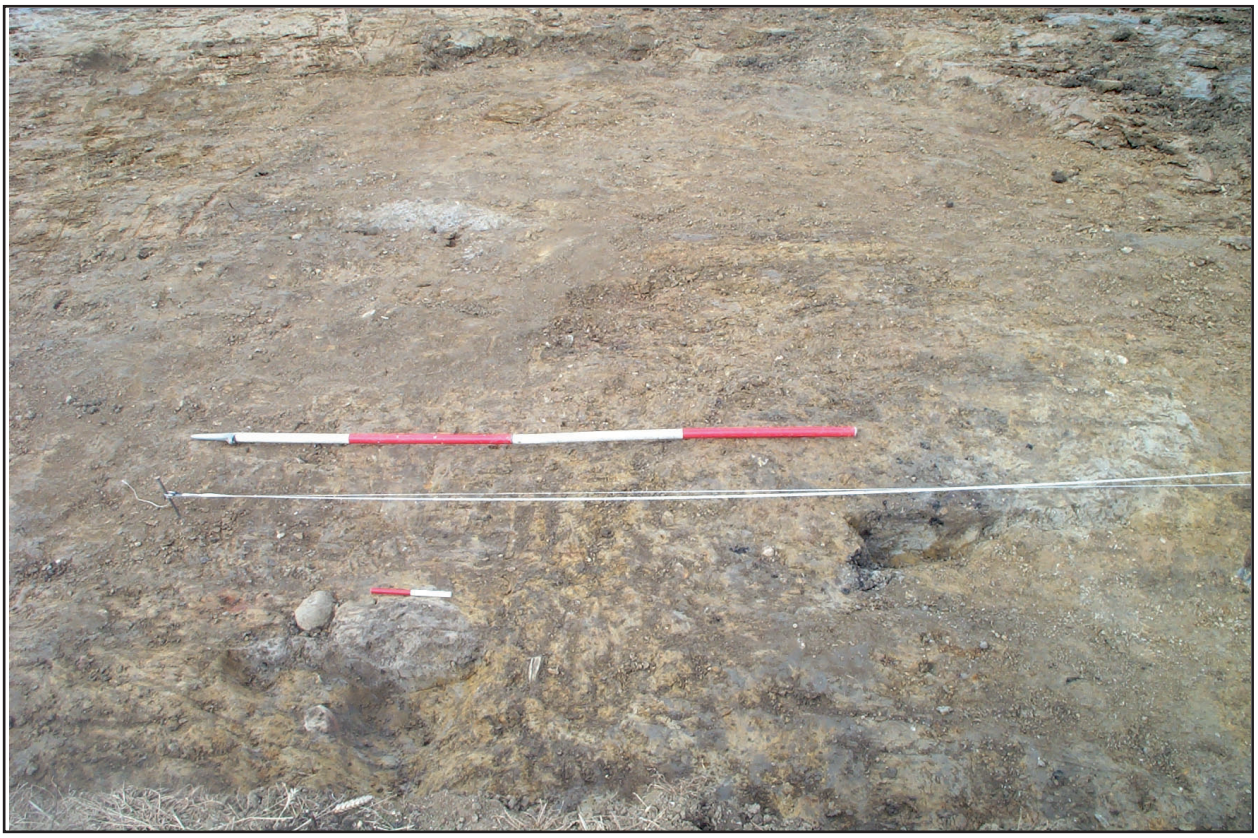


Plate 8: *Trench 22, viewed from East, showing pits 2204 & 2207 (Site 32)*

Plate 9: *Trench 21, viewed from East, showing cut for open cast colliery track (2103)*