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## 6 0 Discussion and Conclusion

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Ditches [1000] and [1003] (Pl 1 2 & 3) were thought to be associated and may be field boundaries. Alternatively they may flank a trackway although this interpretation has to be inferred due to the paucity of direct contextual evidence. Layer [1006] (Pl 3) which spanned the area between the ditches and partially overlay the upper fills of the ditches is thought to be a use horizon representing the surface of an unmetalled trackway that followed the alignment of the ditches after they had silted up. Ditch [1013] is thought to be a field boundary ditch and may be contemporary with ditches [1000] and [1003] although there is no direct supporting evidence apart from the similarity between the observed fill sequences. No dating material was recovered from any of the ditches. The grey colouring and ferrous staining and nodules contained within the ditch fills and layer [1006] and ferrous staining and nodules may be attributed to gleying as a result of a fluctuating water table (Pears 1985: 39) or possibly seasonal water inundation.

The large sunken feature [1008] is tentatively interpreted as a pond. The bioarchaeological remains go some way to support this theory and suggest that the local environment consisted of fairly open country and grazing land (see Appendix 4). The lowest deposit [1012] was waterlogged and may form the base sediment. Two sherds of Roman pottery were recovered from this deposit. The faunal and aquatic floral remains are consistent with regular periods of desiccation. The rapid influx of groundwater during the excavation of the pipe trench to a level above deposit [1012] suggests that the water table has risen in the intervening period. A sherd of Roman amphora was recovered from the upper fill [1009] of this feature.

The single sherd of medieval pottery was recovered from the topsoil in the same field as the above features.

The ditch [1022] encountered to the north of the River Aire was represented by a cropmark observed on an aerial photograph taken by Transco during the flyover of the proposed pipeline route. No dating evidence was recovered from the bank [1015] (Pl 4) or ditch material [1023] however the build-up of alluvial material over these features indicates that they were buried sometime prior to the construction of the present flood defence levees. The log for Borehole 03 indicates that the material that comprises the bank is very similar to the natural which underlies natural [1020]. The ditch and associated bank may be part of a relic dyke system. The Map of the township of West Haddlesey Chapel and East Haddlesey and Temple Hirst in the parish of Burkin in the West Riding of the County of York dated 1789 (Cope-Faulkner 1998: Fig 5) depicts the stub end of a dyke on the eastern side of Hall Ing the name by which the field in which the ditch and bank are situated was known at that time. It remains a possibility that the ditch and bank are a continuation of this dyke although the cartographic evidence suggests that the ditch was out of use by 1789.

The metalled trackway (Pl 5) represented by surfaces [1016] and [1017] encountered to the northeast of the junction between Hensall Lane and the A19 main road is thought to be Haram Lane which ran from West Haddlesey to a junction with the Kellington to Hensall road. The

lane is shown on the Map of the township of West Haddlesey Chapel and East Haddlesey and Temple Hirst in the parish of Burkin in the West Riding of the County of York dated 1789 (*ibid* Fig 5) and is possibly represented on Tuke's Map of the County of York dated 1787 (*ibid* Fig 4). By 1789 Haram Lane appears to have been replaced by a new road running north – south through the investigation area (*ibid* 3). Harem Lane (note the change in spelling) is also depicted on the Plan of the Township of Kellington in the Parish of Kellington in the County of York dated 1839 (*ibid* Fig 9). The northward continuation of Haram Lane is represented by a cropmark in a field immediately to the northwest of the A19 main road (*ibid* Fig 13).

The Roman? trackway east of Kellington (*ibid* Fig 13) (Aerial Photograph No PVA 77 6 A/01) the projected alignment of which intersects the pipeline route at its proposed crossing of Roall Lane west of Eggborough Power Station was not encountered in the pipe trench. The stratigraphy in the pipe trench suggested that the ground level had been raised in this area probably in connection with extensive cut and fill operations associated with the upgrading of the A19 main road and landscaping associated with the construction of Eggborough power station. It is possible that any surviving remains of a Roman? trackway were destroyed during these operations. The original soil level and the tarmac surface of the easterly continuation of Roall Lane were encountered between 0.50 and 0.65m below the current ground surface.

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## 8 0 Acknowledgements

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The author would like to thank Dougie Choules site manager for his unfailing assistance on site which allowed the archaeological monitoring to run smoothly Thanks are also due to Anton Ridsdill project manager for Transco who dealt with any enquiries swiftly and efficiently Their combined efforts made the project a pleasure to be involved in

## 9 0 Appendix 1 ~ List of Contexts

| Context | Description   | Extent            | Depth        |
|---------|---|-------------------|--------------|
| 1000    | Cut Incomplete linear moderate to steep – sided cut with a concave base<br>Aligned approximately northeast – southwest  | 1 60 x 1 80m      | 0 70m        |
| 1001    | Fill Compact dark grey slightly clayey coarse sand containing frequent ferrous nodules (2 – 10mm) Fill of cut [1000]  | 1 30 x 1 30m      | 0 33m        |
| 1002    | Fill Compact mid brownish grey silty coarse sand containing frequent ferrous nodules (2 – 10mm) Upper fill of cut [1000]  | 1 60 x 1 80m      | 0 32m        |
| 1003    | Cut Incomplete linear moderate to steep – sided cut with a concave base<br>Aligned approximately northeast – southwest  | 1 60 x 1 98m      | 0 80m        |
| 1004    | Fill Compact mid grey slightly clayey coarse sand containing frequent ferrous nodules (2 – 10mm) Basal fill of cut [1003]   | 1 00 x 1 27m      | 0 42m        |
| 1005    | Fill Compact dark brownish grey silty coarse sand containing frequent ferrous nodules (2 – 10mm) Uppermost fill of cut [1003]   | 1 60 x 1 98m      | 0 40m        |
| 1006    | Layer Compact light to mid brownish grey silty coarse sand containing occasional to moderate ferrous staining and nodules (2 – 10mm)  | 1 60 x 5 20m      | 0 18 – 0 25m |
| 1007    | Fill Compact mid grey coarse sand containing occasional ferrous staining<br>Primary fill of cut [1000]  | 1 00 x 0 65m      | 0 12m        |
| 1008    | Cut Incomplete shape in plan undetermined moderate – sided cut The base of the cut was undetermined   | 1 60 x 9 25m      | >1 20m       |
| 1009    | Fill Compact mid brown silty sand containing pottery Fill of cut [1008]   | 1 60 x 9 25m      | 0 36m        |
| 1010    | Fill Compact mid brownish grey coarse sand containing moderate ferrous staining and nodules (2 – 10mm) Fill of cut [1008]   | 1 30 x 8 70m      | 0 37m        |
| 1011    | Fill Compact mid grey slightly silty coarse sand containing occasional ferrous nodules (2 – 10mm) The deposit became more silty towards the interface with underlying layer [1012] Fill of cut [1008] | 1 05 x 7 95m      | 0 40m        |
| 1012    | Fill Crumbly mid to dark brown humic silty sand containing large fragments of wood and twigs pottery and mammal bone Fill of cut [1008]   | 0 70 x 7 35m      | >0 12m       |
| 1013    | Cut Incomplete linear moderate to steep – sided cut with a concave base<br>Aligned northwest – southeast  | 1 60 x 1 86m      | 0 73m        |
| 1014    | Fill Sequence of fills very similar to that of cut [1000] (comprising fills [1002] [1001] and [1007])   | 1 60 x 1 86m      | 0 73m        |
| 1015    | Bank Firm orange brown mottled mid brownish grey silty clay   | 1 40 x c 9m       | >0 40m       |
| 1016    | Surface Loose orange-brown sand and gravel containing c 40% sub-angular to rounded pebbles (frequent 15 50mm moderate 50 95mm)  | 1 60m x 2 13m     | max 0 18m    |
| 1017    | Surface Loose mid grey slightly mottled orange-brown sandy clay containing c 30% sub angular to rounded cobbles (70 – 150mm occasional cobbles <190mm)  | 1 40 x 3 70m      | max 0 22m    |
| 1018    | Layer Topsoil refer to section 2  | Route of pipeline | c 0 40m      |
| 1019    | Deposit Soft orange – brown sandy clay  | Unknown x 1 60m   | >1 10m       |
| 1020    | Deposit Firm grey mottled orange–brown slightly sandy clay with occasional rootlets   | Unknown x 1 60m   | >0 50m       |
| 1021    | Deposit Loose mid brown slightly clayey fine sand   | Unknown x 1 60m   | >0 80m       |
| 1022    | Cut Incomplete linear moderate – sided cut The base of the cut was not determined   | 1 30m x 5 50m     | >0 30m       |
| 1023    | Fill Soft yellow brown and mid brownish grey silty clay   | 1 30 x 5 50m      | >0 30m       |

## 10 0 Appendix 2 ~ Archive Index

### 10 1 Drawing Register

| Dwg No | Description  | Scale | Date    | Initials |
|--------|--|-------|---------|----------|
| 1      | Southeast facing section of trackway [1016] and [1017] | 1 20  | 22/5/99 | D T      |
| 2      | Plan of cuts [1000] [1003] [1008] and [1013]           | EDM   | 18/5/99 | D T      |

### 10 2 Photographic Register

| Frame                       | Description   | Scale | Date    | Initials |
|-----------------------------|---|-------|---------|----------|
| <b>Film # 1/060599/1000</b> |   |       |         |          |
| 20 → 22                     | Area adjacent to the A19 road prior to the southeast turn towards the St Gobain glassworks post topsoil strip | None  | 17/5/99 | D T      |
| 23 → 24                     | The southeast extension to the St Gobain glassworks northwest of the railway post topsoil strip               | None  | 17/5/99 | D T      |
| <b>Film # 5/070599/0730</b> |   |       |         |          |
| 1 → 2                       | Chapel Haddlesey to Carlton road → compound post topsoil strip  | None  | 7/5/99  | D T      |
| 3 → 4                       | Chapel Haddlesey to Carlton Road → north dyke crossing post topsoil strip                                     | None  | 7/5/99  | D T      |
| 5 → 6                       | Hensall Lane → south dyke crossing  | None  | 7/5/99  | D T      |
| 10 → 11                     | River Aire → south dyke crossing  | None  | 9/5/99  | D T      |
| 12 → 17                     | Topsoil stripping in progress southwest of River Aire   | None  | 9/5/99  | D T      |
| 26 → 27                     | Hensall Lane road crossing towards southwest post topsoil strip   | None  | 18/5/99 | D T      |
| 28 → 29                     | Trenching bucket used   | 1m    | 18/5/99 | D T      |
| 30 → 31                     | Pipe trench looking northeast towards the compound  | None  | 18/5/99 | D T      |
| 32 → 33                     | Cut [1008] south half   | 2m    | 18/5/99 | D T      |
| 34 → 36                     | Cut [1008] north half   | 2m    | 18/5/99 | D T      |
| <b>Film # 1/170599/0800</b> |   |       |         |          |
| 6 → 8                       | Pipe trench during excavation between the compound and the Chapel Haddlesey to Carlton road                   | None  | 18/5/99 | D T      |
| 9 → 11                      | Cut [1000]  | 1m    | 18/5/99 | D T      |
| 12 → 14                     | Cut [1003]  | 1m    | 18/5/99 | D T      |
| 15 → 17                     | Cuts [1000] and [1003]  | 2m    | 18/5/99 | D T      |
| 18                          | Fill sequence of cut [1008]   | 1m    | 18/5/99 | D T      |
| <b>Film # 1/190599/1637</b> |   |       |         |          |
| 1 → 6                       | Pipe trench from the Chapel Haddlesey to Carlton road toward the north dyke crossing                          | 1m    | 17/5/99 | D T      |
| 7 → 9                       | Bank [1015] between the north dyke crossing and the River Aire  | 2m    | 21/5/99 | D T      |
| 10 → 12                     | Trackway [1016] and [1017] near the Hensall Lane crossing   | 2m    | 22/5/99 | D T      |
| 16 → 18                     | Pipe trench from the south dyke crossing towards the River Aire   | None  | 22/5/99 | D T      |
| 19 → 21                     | Pipe trench from the Hensall Lane crossing looking southwest  | None  | 1/6/99  | D T      |
| 22 → 24                     | Pipe trench from the Roall Lane junction looking northeast to the Hensall Lane crossing                       | None  | 1/6/99  | D T      |

**10 3 Bulk Finds Catalogue**

| Context | Description                                       | Date range  |
|---------|---|---|
| 1009    | Dressel 20 1 sherd amphora                        | late 1 <sup>st</sup> century – 3 <sup>d</sup> century A D |
| 1012    | Romano-British greyware 1 sherd open form         | mid – late 2 <sup>nd</sup> century A D                    |
| 1012    | Romano British greyware 1 sherd wide mouthed bowl | mid – late 2 <sup>d</sup> century A D                     |
| 1012    | Mammal bone                                       |   |
| U/S     | York Gritty ware 1 sherd jar                      | late 11 <sup>th</sup> – 12 <sup>th</sup> century A D      |

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**11 0 Appendix 3 ~ Pottery from Eggborough (OSA 99WB03) Assessment Report**

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*Alan Vince<sup>1</sup>***11 1 Introduction**

A small quantity of Roman and medieval pottery was recovered from this site. The Roman sherds include a substantial fragment of greyware bowl worthy of illustration.

**11 2 Aims and Objectives**

The aims of the assessment were

- to identify and record all the material
- to provide a date range for the finds
- to use these to infer previous land use
- to recommend and justify any further necessary work on the finds
- to identify any aspects of the site's archaeology recognisable from the ceramic finds which require further study or preservation

**11 3 Description**

All items were recorded to common name and form level and any significant details of manufacture, decoration or use were recorded as comments. Quantification was by sherd/fragment count alone and the data was entered into a MS Access 7 database.

**11 3 1 Prehistoric**

None

**11 3 2 Roman**

Sherds of two greyware vessels were recovered from context [1012], one of which is a substantial fragment of a type not represented in Monaghan's York Roman pottery corpus. They probably date to the mid to late 2<sup>nd</sup> century.

A sherd of Dressel 20 amphora was found in context [1009]. Such vessels have a long period of use, starting in the later 1<sup>st</sup> century and continuing into the 3<sup>rd</sup> century.

**11 3 3 Medieval**

A single sherd (unstratified) of a York Gritty ware jar is present. This vessel dates from the late 11<sup>th</sup> or 12<sup>th</sup> century. Kilns producing such wares were probably widespread in northern England and Scotland.

**11 3 4 Post-medieval**

None

**11 4 Recommendations**

The greyware bowl from context [1009] requires illustration. No other work is envisaged at this stage but the material should be retained in an archaeological store for future study.

**11 5 Acknowledgements**

Roman pottery was identified by Barbara Precious.

**11 6 Appendix**

| Sitecode  | Context | cname | Form | Nosh | Action | Description        |
|-----------|---------|-------|------|------|--------|--------------------|
| OSA99WB03 | 1009    | DR20  |      | 1    |        | flake              |
| OSA99WB03 | 1012    | GFIN  | BWNN | 1    | draw   | 35% E 18 D spalled |
| OSA99WB03 | 1012    | GREY  | open | 1    |        | coarse fabnc       |
| OSA99WB03 | U/S     | YG    | JAR  | 1    |        |                    |



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12 0 Appendix 4 ~ Evaluation of bioarchaeological remains from OSA99WB03

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## 12 1 **Summary**

*A single sediment sample from a waterlogged deposit revealed by excavations on the Chapel Haddlesley to Eggborough Pipeline was submitted for an evaluation of its bioarchaeological potential. Moderately diverse assemblages of plant macrofossils and invertebrates were recovered indicating that the deposit formed in a ditch or pond which was intermittently dry and that the local environment consisted of fairly open country and grazing land. Further work on the present sample is not recommended unless dating can be refined and any other dated deposits of this kind should certainly be examined.*

**KEYWORDS** CHAPEL HADDLESLEY EGGBOROUGH EVALUATION DITCH POND ROMAN  
INVERTEBRATES INSECTS PLANT MACROFOSSILS VERTEBRATE

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## 12.2 Introduction

Excavations on the Chapel Haddlesey to Eggborough pipeline revealed a large cut feature with a waterlogged deposit at the base interpreted as being either a small pond or a possible Roman ditch. A single sediment sample (GBA *sensu* Dobney *et al* 1992) was taken and submitted to the EAU for analysis of bioarchaeological remains.

## 12.3 Methods

The material was initially inspected in the laboratory and described using a standard *pro forma*. One 3kg subsample was processed for extraction of plant and invertebrate macrofossils following procedures of Kenward *et al* (1980, 1986).

All invertebrate macrofossils were recorded semi-quantitatively using the scale described by Kenward *et al* (1986) and Kenward (1992). Records were made on a paper *pro forma* for later transferal to a computer database (using Paradox software) for analysis and long-term storage.

## 12.4 Results and Discussion

### Context 1012 Sample 1/T1

Laboratory description *Moist mid-dark brown crumbly humic silty sand. The sediment was more silty and more sandy in places with some patches of paler brown and gingery coloured sand. Rotted fragments of wood and twigs and large fragments of mammal bone were also present.*

There was a very large residue of 1400 cm<sup>3</sup> of woody detritus and sand producing large sieve fractions throughout. Identifiable plant remains were abundant and mostly well preserved. The coarsest material comprised twigs at least some of which were elder *Sambucus nigra* L. (to about 50 mm in length and 20 mm diameter) whose pith often showed curious whitish vesicular non-calcareous mineral replacement. Elder seeds were by far the most abundant remains amongst the seeds and fruits in the sample. Although the evidence from the invertebrates indicates aquatic deposition almost all the plant taxa were terrestrial including other woody plants such as willow (*Salix*) and alder (*Alnus*). There was also a suite of biennial and perennial plants likely to have grown on neglected ground or on the bank of a stream or ditch (especially hemlock *Conium maculatum* and stinging nettle *Urtica dioica*). Perhaps the lack of aquatic plants indicates shade from overhanging trees (accounting for the elder twigs and willow buds).

Evidence from the plant remains for human activity was apart perhaps from the presence of some annual weeds of disturbed habitats (e.g. henbane *Hyoscyamus niger*, fat hen *Chenopodium album* and black nightshade *Solanum nigrum*) restricted to records of a single seed of flax (*Linum usitatissimum*), a single fragment of a hemp (*Cannabis sativa*) achene and a little charred cereal chaff probably including remains from spelt wheat (*Triticum spelta*). The hemp and flax may have originated in crops retted in the body of water (perhaps at some

distance from the point of deposition given the very low concentrations) whilst the cereal chaff presumably arrived in ash from a fire. All these remains might conceivably have originated in an adjacent cultivated area however.

Traces of peatland/heathland taxa were recorded: leaves of *Sphagnum* and a capsule of heather *Calluna vulgaris*; these may have originated in peat used as fuel as it seems unlikely they were part of the local flora.

A large and moderately diverse assemblage of invertebrates was recovered from the flots and residue. Evidence from the invertebrate remains accords quite closely with that from the plants except for a lack of indication of human settlement. Many of the aquatic beetles (for example *Ochthebius mmimus* (Fabricius), *Hydrobius fuscipes* (Linnaeus) and *Hydrochus* sp.) and several carabids (*Bembidion* spp., *Pterostichus nigrita* (Paykull), *Nebria* sp. and *Loricera pilicornis* (Fabricius)) would have lived amongst vegetation in shallow water. All of the insects associated with the vegetation could have invaded within a year or so and the presence of several hundred water flea (*Daphnia*) resting eggs together with the rather poorly developed aquatic vegetation indicate that the body of water was probably subject to regular periods of dessication.

Several species of *Apion* and at least three individuals of *Cidnorrhmus quadrimaculatus* (Linnaeus) suggest that the banks of the ditch/pond supported weedy vegetation which included vetches and nettles. The surrounding area was probably open country with short grassland from where the elaterids, several ground beetles (*Calathus* sp., *Amara* sp., *Harpalus* sp., *Notiophilus* sp. and *Trechus quadristriatus/obtusus*) and *Phyllopertha horticola* (Linnaeus) may have originated. Grazing of livestock would account for the presence of large numbers (at least ten percent of the assemblage) of dung beetles, most of which were *Aphodius* species typically associated with sheep, horses or cattle. There is no evidence from the insects to suggest the proximity of woodland: the single scolytid and woodworm (*Anobium punctatum* (Degeer)) could have originated from a fence post or stray branch.

The presence of nearby human habitation or dumping of domestic waste is not indicated from the invertebrate assemblage: the few facultative synanthropes (*Omalinae* sp., *Atomaria* sp. and *Ephistemus* sp.) could all have exploited litter on the banks of the ditch/pond.

A mandible and fragments of skull from a cow were also present in the residue.

## 12.5 Recommendations

Any other deposits with this kind of waterlogged preservation from the excavation (provided they can be dated) should certainly be examined to establish whether further evidence for human activity and environmental disturbance exists. No further work is recommended for the present sample unless dating can be established reasonably closely, in which case the insect remains could provide a useful indication of local environment.

## 12.6 *Storage and disposal*

The sediment sample should be retained for future analysis

## 12.7 *Archive*

All paper and electronic records pertaining to the work described here are currently stored in the Environmental Archaeology Unit, University of York

It is recommended by the EH-funded staff that long-term storage of bioarchaeological remains should be in the local receiving museum

## 12.8 *Acknowledgements*

The authors are grateful to Nicky Pearson of On-Site Archaeology for providing the material and archaeological information and to English Heritage for enabling HK and AH to work on this material

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## 13 0 Appendix 5 ~ Written Scheme of Investigation

### 13 1 *Summary*

- 13 1 1 Transco proposes to construct a new gas pipeline between Chapel Haddlesey and Eggborough North Yorkshire. A desk top archaeological assessment has identified a number of areas of potential archaeological interest along the route (APS 1998). These include areas with potential for the survival of remains of prehistoric, Romano British and medieval date. Accordingly, the Planning Archaeologist has advised the Client that archaeological recording in these areas of potential should be carried out in response to the pipeline construction works.

### 13 2 *Purpose*

- 13 2 1 This method statement represents a summary of the broad archaeological requirements to mitigate the effects of utilities works on sites of archaeological or historic interest as recognised in the Gas Act 1995.

### 13 3 *Location and Description*

- 13 3 1 The proposed pipeline route covers a length of c 3km and crosses three parishes: Chapel Haddlesey, Kellington and Eggborough. At the northern end of the route, the pipeline runs from a point to the north east of the village of Chapel Haddlesey, crosses the River Aire, runs parallel with the A19 road and ends at a point south west of Eggborough Power Station. The route lies within the Selby District of North Yorkshire, close to the southern boundary of the County. Eggborough lies c 10km south west of Selby and c 30km south of York. The pipeline crosses predominantly agricultural land under arable cultivation. The area ranges from c 6m above Ordnance Datum (AOD) in the north to c 10m AOD in the south, across the floodplain of the River Aire.
- 13 3 2 The proposed pipeline will be 200mm in diameter and will be laid using open cut methods, other than the crossing of the River Aire and any road and rail crossings which will be carried out using horizontal directional drilling techniques. The working easement width will be 18.00m and the open cut trench width no more than 1.00m. The Client has advised that the pipeline route has not yet been fixed, but that little deviation from the original route is expected.

### 13 4 *Historical and Archaeological Background*

- 13 4 1 In May 1998, an archaeological desk top assessment was undertaken by Archaeological Project Services (APS 1998) for Engineering Archaeological Services Ltd in order to determine the archaeological implications of the proposed new gas pipeline. This report collated information from a variety of existing written and graphic sources and identified three main areas of archaeological potential along the route. These are summarised below.
- 13 4 2 Approximately 1km west of the pipeline route, in Kellington parish, a cropmark complex, interpreted as being a Romano British fort and associated field systems (site 3, APS 1998, SMR 9273) may be associated with a parcelmark seen on aerial photographs of a trackway, the projected alignment of which intersects the pipeline route at its proposed crossing of Roall Lane, west of Eggborough Power Station.
- 13 4 3 Additional, undated cropmarks lie to the north at the southern edge of the River Aire floodplain (site 12, APS 1998, SMR 9321). This floodplain is an area where river silts may mask remains of early settlement and activity of prehistoric and Romano British date (see Fig 13, APS 1998).
- 13 4 4 On place name evidence, it is likely that the villages in the vicinity of the pipeline route had their origin in the Saxon period, however there has been no substantive early Medieval material found in this area. Later

Medieval sites comprise a moated enclosure at Hall Garth southeast of Chapel Haddlesey and a possible deserted medieval settlement near Roall Hall (sites 7 and 4 APS 1998 SMR 9317 and 9274 01 respectively)

- 13 4 5 Medieval pottery has been found in Chapel Haddlesey adjacent to the proposed pipeline route however it is not known whether this may suggest an occupation site or merely a manuring scatter (site 13 APS 1998 SMR 9334)

### 13 5 Objectives

- 13 5 1 The objectives of the archaeological recording work within the three areas of potential identified above in section 4 are
- to locate recover identify and conserve (as appropriate) any archaeological artefacts exposed during pipeline construction
  - to locate sample record and interpret any archaeological deposits exposed during pipeline construction
  - to prepare a report summarising the results of the work,
  - to prepare and submit a suitable archive to the appropriate museum

### 13 6 Proposed Methodology

- 13 6 1 *On Site Archaeology* shall maintain a permanent presence on site to supervise all ground disturbance works associated with the pipeline construction in the three areas of archaeological potential identified in section 4 above These are
- The floodplain of the River Aire including the terrace above for 100m
  - The point along the A19 road where the projected alignment of the possible Romano British trackway crosses the pipeline easement
  - The field to the northeast of Chapel Haddlesey where medieval pottery has previously been found
- 13 6 2 Archaeological work shall include monitoring the initial topsoil strip during easement preparation and should allow for the opportunity of hand cleaning of areas of subsoil This shall be followed by detailed observation of the open cut for the pipeline as appropriate and any post construction drainage trenches Where overburden is being removed in more than one area at any one time within the three areas of archaeological potential each area where earthmoving plant is operating shall be subject to direct archaeological supervision
- 13 6 3 *On Site Archaeology* shall be informed of the correct timing and schedule of excavation works Overburden such as turf topsoil made ground, rubble or other superficial fill materials should be removed by machine using a back acting excavator fitted with a toothless or ditching bucket down to the top of archaeological deposits or the natural subsoil (C Horizon or soil parent material) whichever appears first Topsoil will be kept separate from subsoil or fill materials
- 13 6 4 Where structures soil features and finds of archaeological interest are exposed or disturbed by excavation works *On Site Archaeology* will be provided with the opportunity to observe clean assess and, where appropriate excavate by hand, sample and record these features and finds Standard *On Site Archaeology* techniques will be followed throughout (see Appendix 1) This involves the completion of a context sheet for each deposit or cut encountered, along with plans and/or sections drawn to an appropriate scale Heights above Ordnance Datum (AOD) will be calculated by taking levels from a Temporary Benchmark (TBM) which will

then be tied in with an existing Ordnance Survey benchmark. A photographic record of the deposits and features will be maintained.

If the pipeline contractors or plant operators observe archaeological remains during the course of works they should immediately notify *On Site Archaeology*.

- 13.6.5 All pipe trenching activities within the three areas of archaeological potential will be monitored and any archaeological features that may be exposed in the trench sides recorded, subject to health and safety considerations.
- 13.6.6 Isolated archaeological features revealed during and/or following the removal of the overburden will be excavated sufficiently to establish their character and extent and recorded and accurately located during the initial topsoil strip. Should a complex of archaeological features be revealed during the removal of overburden a mitigation strategy will be devised in consultation with the Client and the Planning Archaeologist with the emphasis placed on preservation of archaeological remains *in situ* where practically possible. This may involve protecting the archaeological remains with a layer of Terram capped with graded roadstone clumps to a suitable depth and if circumstances allow the use of bog boards for further protection. The excavation of archaeological features will then be confined to the cut of the pipe trench. It must be stressed that this course of action is wholly dependant upon the prevailing ground, subsoil and weather conditions and following consultation with the Client and the Planning Archaeologist. Where appropriate a sufficient sample of any archaeological features and deposits revealed will be excavated in an archaeologically controlled and stratigraphic manner to understand the full stratigraphic sequence down to naturally occurring deposits.
- 13.6.7 A strategy for palaeoenvironmental sampling and analysis shall be devised to deal with any potentially important palaeoenvironmental deposits which may be uncovered. Particular attention will be paid to sampling securely dated deposits and features and specifically any waterlogged and/or burnt deposits.
- 13.6.8 Heavy plant or excavators should not be operated in the near vicinity of archaeological remains until the remains have been recorded and *On Site Archaeology* has allowed operations to recommence at that location. Subsoils and sterile parent materials below archaeological deposits can be removed without archaeological supervision using a toothed bucket. Excavations should be backfilled, replacing subsoil first and topsoil last.
- 13.6.9 Metal detecting will be undertaken within the pipeline corridor including scanning of topsoil and spoil heaps subject to archaeological supervision and recording so that metal finds are properly located, identified and conserved. All metal detection will be carried out following the Treasure Act 1996 Code of Practice. Where feasible the participation of a legitimate metal detection club which is a member of the National Council for Metal Detecting will be considered.
- 13.6.10 Upon completion of archaeological field recording work, samples shall be processed and all finds cleaned, identified, assessed, spot dated, and properly stored.

### 13.7 Access and Monitoring

- 13.7.1 Access to the pipeline corridor shall be arranged through the Client.
- 13.7.2 The project will be monitored by the Planning Archaeologist to whom not less than seven days written notice must be given of the commencement of fieldwork.
- 13.7.3 *On Site Archaeology* will ensure that monitoring takes place by arranging monitoring meetings as follows:
- a preliminary meeting or discussion at the commencement of the contract.

- progress meeting(s) during the fieldwork phase at appropriate points in the work schedule to be agreed
- a meeting during the post fieldwork phase to discuss the draft report and archive before completion

13 7 4 *On Site Archaeology* will ensure that any significant results are brought to the attention of the Planning Archaeologist and the Client as soon as is practically possible. This is particularly important where there is any likelihood of the contingency period, or funding being required.

### 13 8 *Report*

13 8 1 A summary report shall be produced following the County Council's Guidance on reporting *NYCC Report Format Guidelines* (Appendix 7). The report will contain at a minimum:

- a concise non technical summary of the project and its results
- a summary description of the aims and methodology of the work background planning or administrative details of the project
- a description and interpretation of the findings
- an assessment of the importance of the archaeology recorded, including its historical context where appropriate
- a catalogue of finds features samples and primary records
- a location plan at an appropriate scale with grid references
- a copy of the brief and agreed project design and an indication of any variations
- an index to the project archive
- illustrations of significant features using conventionally scaled plans sections and photographs as appropriate

13 8 2 All excavated areas will be accurately mapped with respect to nearby buildings and roads

13 8 3 Where few or no finds are made it may be acceptable subject to discussions with the Planning Archaeologist to provide the report in the form of a letter with plans attached

13 8 4 Five copies of the report should be produced and submitted to the Client North Yorkshire County Council Heritage Unit SMR, the museum accepting the archive and the National Monuments Record, RCHME in Swindon

### 13 9 *Archive*

13 9 1 Archive deposition should be undertaken with reference to the County Council's Guidelines on the Transfer and Deposition of Archaeological Archives (see attached). A field archive should be compiled consisting of all primary written documents plans sections and photographs. Catalogues of contexts finds soil samples plans sections and photographs should be produced and cross referenced.

13 9 2 *On Site Archaeology* will liaise with an appropriate registered museum to establish the detailed requirements of the museum and discuss archive transfer in advance of fieldwork commencing. The relevant museum curator shall be afforded access to visit the site and discuss the project results.