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Northern Archaeological Associates

**KEXBY
WASTEWATER TREATMENT WORKS
CITY OF YORK**

ARCHAEOLOGICAL WATCHING BRIEF

PROJECT DESIGN

prepared for

COSTAIN HASWELL

on behalf of

YORKSHIRE WATER SERVICES LTD

NAA 04/84

July 2004

YORKSHIRE WATER SERVICES LTD

KEXBY WASTEWATER TREATMENT WORKS

CITY OF YORK

ARCHAEOLOGICAL WATCHING

PROJECT DESIGN

1.0 INTRODUCTION

- 1.1 This document presents a project design (detailed methods statement) for undertaking an earthwork survey and archaeological watching brief during the construction of a new wastewater treatment works (WwTW), associated pipelines and access roadway at Kexby, near York (City of York Council planning reference 04/01613/FUL).
- 1.2 The document has been prepared by Northern Archaeological Associates (NAA) for Costain Haswell on behalf of Yorkshire Water Services Ltd in order to fulfil the relevant planning condition (No. 3) relating to archaeology attached to the approval of planning permission for the scheme. The archaeological watching brief within the area of the wastewater treatment works and access roadway is being undertaken as part of the relevant planning condition for the scheme. The monitoring along the pipeline routes is being undertaken to accord with Yorkshire Water's general duties in respect of conservation as required by the Water Act (1989).
- 1.3 The project design is based upon the results of an earlier cultural heritage appraisal of the proposed development area undertaken by NAA for Costain Haswell in 2003. The project design is to be submitted to the Principal Archaeologist for the City of York Council in order that the archaeological response constitutes a scheme of works that has been agreed with the planning authority in accordance with the planning condition.
- 1.4 The scheme comprises monitoring of topsoil stripping and deeper excavation works during the construction of the wastewater treatment works and an access roadway.
- 1.5 The work will be undertaken in accordance with the relevant code of practice issued by the Institute of Field Archaeologists (IFA 1999).

2.0 LOCATION AND TOPOGRAPHY

- 2.1 Kexby is located at the western side of the River Derwent 9km east of the City of York (Figure 1). It lies within Kexby civil parish.
- 2.2 The scheme consists of construction of a new pipeline built to intercept an existing sewer at the southern end of Old Hall Lane and carry the flow for some 75m across a field to a new wastewater treatment works (centred at SE 7022 5083), within the same field and adjacent to the southern end of The Crescent at the southern edge of the

village. A second pipeline some 20m long would intercept an existing sewer within The Crescent. After treatment, the flow would be discharged along a new pipeline for some 30m to an existing outfall pipe running to the south-east towards the river. Some 90m of new access roadway would also be constructed, running from the southern end of Old Hall Lane southwards and then eastwards across the field to the new wastewater treatment works. The treatment works would occupy an area measuring 16m by 13m.

- 2.3 The surrounding landscape of the scheme is the flat and low-lying flood-plain of the River Derwent at a level of some 10m OD.
- 2.4 The solid geology of the development area consists of Permian and Triassic Sandstones, overlain by lacustrine clays, silts and sands (British Geological Survey 1977; 1979). The soils are mapped as being of the Fladbury 3 Association, grey clayey pelo-alluvial soils, seasonally waterlogged and generally under permanent grass (Soil Survey of England and Wales 1983; Jarvis *et al* 1984, 194-6).

3.0 ARCHAEOLOGICAL BACKGROUND

- 3.1 The cultural heritage appraisal was based upon research undertaken at the City of York Sites and Monuments Record.
- 3.2 The cultural heritage appraisal (NAA 2003) recorded archaeological sites and Listed Buildings within a study area 0.5km in radius centred upon the new wastewater treatment works, which are listed in Table 1 below. Unless otherwise stated, sites are identified by their City of York Sites and Monuments Record (SMR) number. A central grid reference, suggested classification and date are provided for each site, which are graded in archaeological significance as of 1 (national), 2 (regional) and 3 (local) importance. Grading is based upon professional judgement and the criteria set out in Annex 4 of Planning Policy Guidance Note 16 (DoE 1990). The location of the sites is indicated on Figure 2.

Table 1: Kexby cultural heritage sites

Site	SMR	NGR	Description	Period	Grade
1	5736	SE 702 510	Chantry Chapel (site of)	Medieval	3
2	5737	SE 703 512	Mew Hall Manor House (site of)	Late 16th century	3
3	3/80	SE 7006 5103	Church of St Paul	1852	LB II
4	3/81	SE 7054 5106	Kexby Old Bridge	1650	SM 171, LB II*
5	3/82	SE 7050 5111	Road viaduct	1847	LB II
6	AP	SE 7000 5092	Crop-mark enclosure	Unknown	3

- 3.3 A total of six sites or Listed Buildings were identified within the study area and range from medieval to 19th century in date or are undated. Three of the sites are Listed Buildings and one is also a Scheduled Monument.
- 3.4 The earliest recorded site in the general area, a Romano-British settlement discovered during monitoring of construction of a pipeline, lies some 1km to the north-west of

the development area. A cropmark enclosure (Site 6) lying some 100m to the north of the development area may also be Romano-British in date.

- 3.5 Kexby village originated in the medieval period and includes the sites of a former chapel (Site 1) and the 16th century Mew Hall manor house (Site 2). Kexby Bridge (site 4) is a scheduled monument and a grade II* listed structure dated to 1650. The later road viaduct (Site 5) and St Paul's church (Site 3), both of 19th century date, are Grade II listed.

4.0 ASSESSMENT OF IMPACT AND MITIGATION

- 4.1 None of the archaeological sites and Listed Buildings recorded during the cultural heritage appraisal lie immediately adjacent to the development area and will be unaffected by the development. All of the listed buildings lie at some distance and are screened from the development area by other structures, so that the development will have no impact upon their visual setting.
- 4.2 The crop-mark enclosure (Site 6) lying some 100m to the north of the development area, and considered to be of Romano-British date, is likely to have been associated with an extensive field system. There is hence a potential for in-filled ditches or other below-ground remains associated with such an ancient agricultural landscape to be present within the development area.
- 4.3 It is considered that there is a limited potential for other previously unrecorded remains of prehistoric to medieval date to be encountered during construction.
- 4.4 All areas of topsoil stripping within the scheme will be archaeologically monitored. Depending upon the results of this initial monitoring, areas of deeper excavation may also require monitoring.

5.0 OBJECTIVES

- 5.1 The principal objectives of the archaeological watching brief are:
- to investigate and record any archaeological features identified during the course of topsoil stripping prior to construction works and recover any associated artefacts
 - to monitor and record any archaeological features identified during deeper excavation
 - to establish the location, date and nature of any areas of archaeological activity and assess the degree of preservation of any remains encountered
 - a report shall be prepared on the results of the excavation of any significant archaeological remains to be published in a local, regional or national journal as appropriate

6.0 MITIGATION METHODOLOGY

Description of archaeological works

- 6.1 Initial archaeological monitoring of topsoil stripping will be undertaken within the area of the new wastewater treatment works, access roadway and along the pipeline corridors in order to determine the presence of archaeological features or deposits. If such deposits are present in any area, that area would remain un-trafficked by the contractor until archaeological excavation and recording has been completed. Areas of archaeological significance will be demarcated. On the completion of any necessary excavation within designated areas these will be released to the contractor. Wherever possible a vehicular route along the pipeline corridors will be made available to the contractor.
- 6.2 Should single or isolated groups of archaeological features be identified, then the archaeologist(s) undertaking the watching brief will generally be expected to clean, excavate and record them in the course of their duties. In the case of extensive or complex archaeology, the archaeological contractor will submit a project design for the mitigation of the impact on the archaeological remains encountered. The area shall be released to the contractor on completion of any archaeological works identified in the respective project design.

7.0 ARCHAEOLOGICAL RECORDING

- 7.1 Any archaeological features identified during the monitoring of topsoil stripping or deeper excavation would be hand-cleaned, planned and recorded. Discrete features will be hand excavated. This would normally amount to 50% of domestic and settlement features and 100% of features of a ritual or ceremonial nature (such as burials). Sample sections of linear features will be excavated totalling up to 20% of the overall length within the stripped corridor. The site code will be KSW04.
- 7.2 Significant archaeological features will be located using a Leica TC 500 electronic station linked to a Fujitsu Stylistic 1200 pen computer using PenMap software. Information will be transferred to AutoCAD R14 software and reproduced for incorporation within the report. All levels will be tied in to Ordnance Datum.
- 7.3 All archaeological features would be photographed and recorded at an appropriate scale. Sections will normally be drawn at a scale of 1:10. Archaeological plans will normally be drawn at a scale of 1:20.
- 7.4 A written description of features will be recorded using the NAA context recording system (a derivation of the MoLAS system).
- 7.5 A photographic record of the site will be taken using black and white prints and colour slides at a minimum format of 35mm.
- 7.6 Pottery and animal bone will be collected as bulk samples whilst significant artefacts will be three-dimensionally recorded prior to processing. Finds will be recorded and processed and submitted to specialists for post-excavation assessment.

- 7.7 All finds recovered will be appropriately packaged and stored under optimum conditions. Finds recovery and storage strategies would be in accordance with published guidelines (English Heritage 1995; Watkinson and Neal 1998). Provision will be made for site visits from specialists and the conservator as necessary. Where necessary a conservation assessment will be prepared.
- 7.8 Forty-litre bulk palaeoenvironmental samples will be taken from appropriate deposits (such as ditch and pit fills) and submitted for assessment. Particular attention will be paid to the recovery of samples from any waterlogged deposits which may be present. Recovery and sampling of environmental remains would be in accordance with guidelines prepared by the English Heritage (2002). Samples will be specifically taken for pollen analysis from appropriate deposits (e.g. the primary silts of pits and ditches). Any other types of samples will be taken as appropriate.
- 7.9 Secure contexts will be sampled for dating purposes as appropriate (whether on site or as sub-samples of processed bulk samples). This will include C-14 dating, archaeomagnetic dating and dendrochronological dating. Any concentrations of charcoal or other carbonised material recovered on site will usually be retained. Samples for archaeomagnetic dates would be taken on site by the relevant specialist. Samples for dendrochronological dates would be taken either on site or from recovered timbers by the relevant specialist in accordance with published guidelines (English Heritage, no date). Samples would be processed subsequent to initial post-excavation assessment.
- 7.10 Any human remains (inhumations and cremations) encountered during topsoil stripping will be excavated, recorded and recovered along with any associated artefacts. A *Licence For The Removal Of Human Remains* will be obtained from the Home Office.
- 7.11 Any artefacts of gold or silver recovered during the watching brief which are considered to be treasure will be dealt with in accordance with the *Treasure Act* (1996) code of practice.
- 7.12 If an aircraft crash site were encountered during the course of the watching brief any remains would be dealt with in accordance with *The Protection of Military Remains Act* (1986)

8.0 MONITORING

- 8.1 Access will be made available at all reasonable times to the Principal Archaeologist for the City of York Council and to archaeological representatives of English Heritage to inspect the excavations on site.
- 8.2 Access to the site will be on the basis of prior notification and subject to any necessary health and safety requirements.

9.0 POST-EXCAVATION ASSESSMENT

- 9.1 If the monitoring recovers a minimal amount of archaeological material the results shall be presented in an appropriate short report.
- 9.2 In the event of the discovery of more significant remains then a post-excavation assessment of the site records and finds will be undertaken in accordance with both national and local guidance (English Heritage 1991).
- 9.3 A post-excavation assessment report on the watching brief will be prepared and submitted to the Sites and Monuments Record within six months of the completion of fieldwork.

This will include:

- a summary of the project background
 - the site location
 - a methodology
 - a summary of the project's results
 - an interpretation of the results in appropriate context
 - a post-excavation assessment of the stratigraphic and other written, drawn or photographic records
 - a catalogue and post-excavation assessment of each category of artefact recovered during the excavation
 - a catalogue and post-excavation assessment of any faunal remains recovered during the excavation
 - a catalogue of soil samples collected and post-excavation assessment of the results of the soil-sampling programme
 - catalogues and post-excavation assessments and summary reports of all scientific dating procedures or other analyses carried out
 - an appendix containing a list and summary description of all contexts recorded
 - a summary of the contents of the project archive and its location
- 9.4 On instruction from Costain Haswell, following completion of the archaeological works, a copy of the site archive and a report on the results of the watching brief will be submitted to the City of York Sites and Monuments Record (SMR). Subject to any comments of any of the aforementioned parties, the report may be published in an appropriate regional or national journal. The need for such a publication will be made in consultation with the archaeological representative of the local planning authority. A copy of the final report will be submitted to the SMR as a public document.

10.0 PERSONNEL

- 10.1 Northern Archaeological Associates have been commissioned by Costain Haswell to prepare the project design and to undertake the watching brief and post-excavation assessment report on behalf of Yorkshire Water Services Ltd.
- 10.2 Peter Cardwell will be the Partner of the firm managing the project. He graduated from the University of Exeter in 1983 with a BA (Hons) in History and Archaeology and worked as a freelance archaeological consultant for six years prior to establishing NAA in 1990. He has managed numerous archaeological projects throughout northern England, including a number of schemes related to proposed wastewater treatment works in Yorkshire.
- 10.3 The member of staff undertaking the day to day archaeological monitoring of construction will be selected closer towards the start date. Additional staff would be engaged should construction work on more than one front or significant archaeological remains be encountered which require excavation. They would be recruited from personnel with appropriate archaeological experience at supervisor level.

11.0 SUB-CONTRACTED STUDIES

Specialist studies

- 11.1 Although the range of artefacts that may be recovered cannot be accurately predicted at this stage, the most common specialist requirements are listed below, indicating the nature of the material, the name of the specialist and the organisation if applicable. Each of the specialists listed below has a proven record of expertise in both their particular field of work and the geographical area, and has previously undertaken specialist work for NAA. Specialist work and sampling strategies where necessary will be undertaken in consultation with the English Heritage Regional Archaeological Science Advisor.
- 11.2 Further details of all the individuals and organisations listed can be supplied if additional information is required.

<i>Material</i>	<i>Specialist</i>
Worked flint	Peter Makey
Neolithic pottery	T G Manby
Bronze Age pottery	T G Manby
Iron Age pottery	Peter Didsbury
Romano-British pottery	Peter Didsbury
Anglo-Saxon pottery	Peter Didsbury and Jane Young
Medieval pottery	Peter Didsbury
Post-medieval pottery	Peter Didsbury

Metalwork	Jonathan Watt
Leather	Jonathan Watt
Worked bone	Jonathan Watt
Human bone	Malin Holst
Animal bone	Deborah Jaques (Palaeoecology Research Services)
Palaeobotanical remains	Dr Allan Hall (Environmental Archaeology Unit)
Molluscs	John Carrott (Palaeoecology Research Services)
Insect remains	Harry Kenward (Environmental Archaeology Unit)
Conservation	Erica Paterson (York Archaeological Trust)
Worker timbers	Carol Morris
Dendrochronology	University of Nottingham
Archaeomagnetic dating	Dr Mark Noel (Geoquest Associates)
Archaeometallurgy	Jane Cowgill
Geoarchaeology	Wetland Archaeology and Environments Research Centre

12.0 SITE ARCHIVE

12.1 The site archive shall contain all the data collected during the investigative work detailed in section 6.0 above, including records, finds and environmental samples. It will be quantified, ordered, indexed and internally consistent.

12.2 Adequate resources shall be provided during fieldwork to ensure that records are checked and internally consistent.

12.3 Archive consolidation will be undertaken immediately following the conclusion of fieldwork:

- the site record will be checked, cross-referenced and indexed as necessary
- all retained finds will be cleaned, conserved, marked and packaged in accordance with the requirements of the recipient museum
- all retained finds will be assessed and recorded using pro-forma recording sheets, by suitably qualified and experienced staff. Initial artefact dating will be integrated with the site matrix
- all retained environmental samples will be processed by suitably experienced and qualified staff and recorded using pro-forma recording sheets

12.4 The archive will be assembled in accordance with the specification set out by English Heritage (1991). In addition to the site records, artefacts, environmental remains and other sample residues, the archive shall contain:

- site matrices where appropriate

- a summary report synthesising the context record
- a summary of the artefact record
- a summary of the environmental record

12.5 The integrity of the primary field record will be preserved. Security copies in digital or fiche format will be maintained where appropriate.

12.6 A copy of the site report and the full site archive would be deposited at the Yorkshire Museum, subject to the agreement of the landowner. Deposition shall be in accordance with written guidelines on archive standards and procedures (Society of Museum Archaeologists 1995) and after discussion with the museum. NAA will liaise with the museum curator regarding their requirements in ordering, boxing and labelling the site archive.

12.7 In addition to the deposition of the archive copies of all relevant reports would also be deposited with both the City of York Sites and Monuments Record (SMR) and National Monuments Record (NMR).

12.8 The City of York Council SMR supports the *Online Access to Index of Archaeological Investigations* (OASIS) project. An online report form would be completed at the OASIS website.

13.0 PROGRAMME

13.1 Although the proposed programme may be subject to variations, those elements of the development proposals which will require archaeological monitoring are set out below (including an indicative time that will be required on site) together with the timetable for the preparation of the associated report.

13.2 The proposed programme would be as follows:

Commencement of topsoil stripping: week commencing 16 August 2004

Completion of monitoring : week commencing 30 August 2004

Completion of post-excavation assessment report: end of February 2005

13.3 In the event of significant archaeological remains being encountered during the course of archaeological monitoring a methods statement for the archaeological mitigation of the said remains would be prepared in consultation with the archaeological representative to the local planning authority. This methods statement would include a programme for further archaeological work respective to the significant remains.

14.0 CONFIDENTIALITY, COPYRIGHT AND PUBLICITY

14.1 The results of the work will remain confidential – initially being distributed only to the client, their agents and the Sites and Monuments Record – and will remain so until such time as the condition is discharged and is then deemed to have entered the public domain.

- 14.2 The copyright of any written, graphic or photographic records and reports will rest with NAA, that is the archaeological organisation undertaking the fieldwork and analysis.
- 14.3 No publicity will be entered into with respect to the results of the work, during the course of any investigations, without the express consent of Costain Haswell and Yorkshire Water Services Ltd.

15.0 HEALTH AND SAFETY

- 15.1 The firm complies with the 1974 Health and Safety Act and its subsequent amendments in all its operations. In this respect the SCAUM manual on archaeological health and safety is followed for site works, and as normal practice, First Aid boxes, an Accident Book and a telephone is provided for each project. Where required, safety helmets and reflective jackets are also provided. It is normal policy for a vehicle to be available on site for emergency purposes and site staff must be appropriately equipped in terms of bad weather gear. For each project a list of contact names and telephone numbers is provided for Accident and Emergency units, doctors, and dentists, together with an appropriate site identification. The site supervisor is normally nominated as site safety officer and all supervisory staff have undertaken a first aid training course. Information on service locations is obtained prior to the commencement of any excavation works. A Risk Assessment to HSE requirements is prepared in advance of the commencement of site works.
- 15.2 All site staff will have undergone a health and safety induction from the main site contractor.

Northern Archaeological Associates

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Text: Greg Speed

Illustrations: Catherine Chisman and Damien Ronan

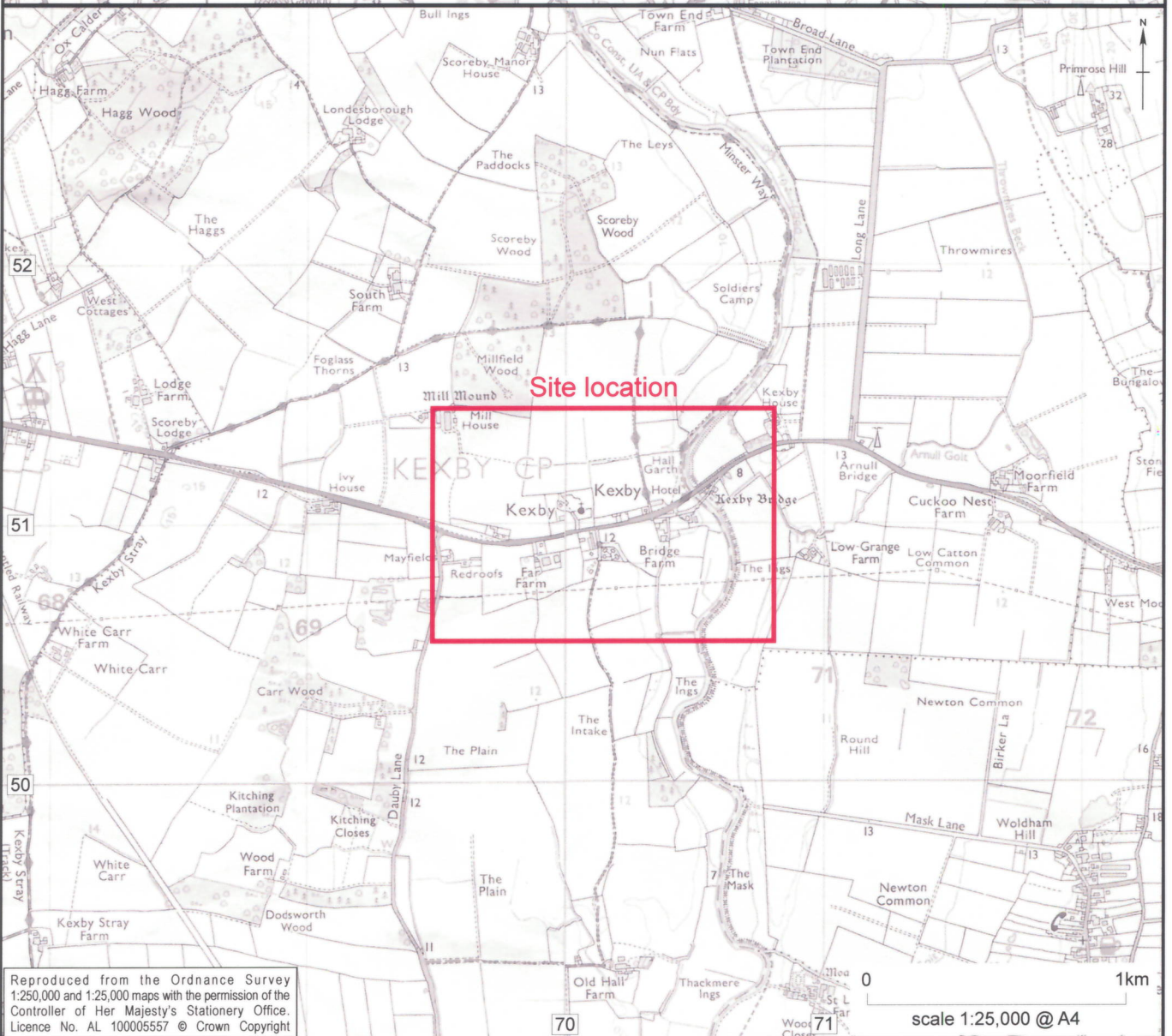
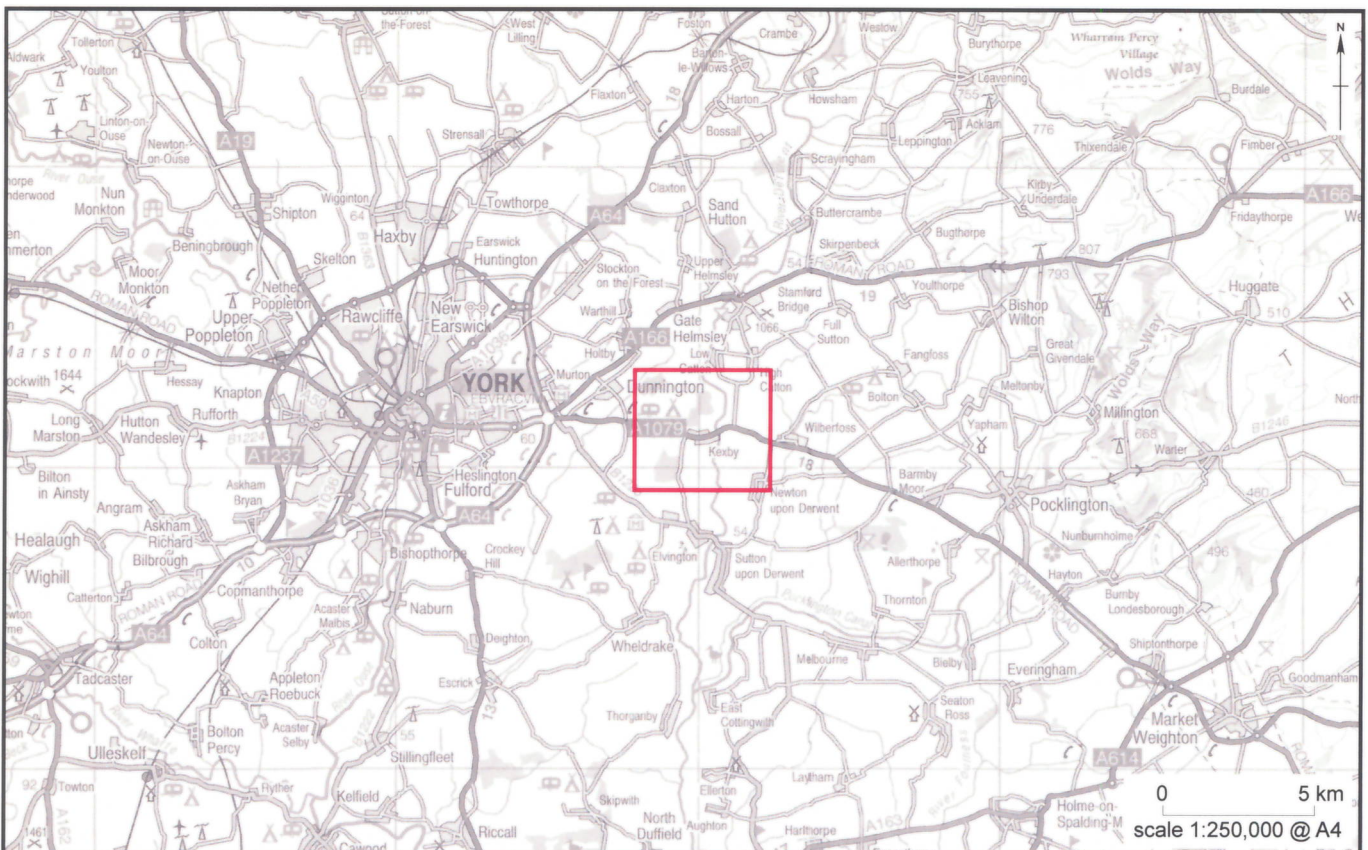
Edited by: Peter Cardwell

REFERENCES

- English Heritage (1991) *Management of Archaeological Projects*
- English Heritage (1995) *A Strategy for the Care and Investigation of Finds Ancient Monuments Laboratory*
- English Heritage (2002) *An Environmental Archaeology : A Guide to the theory and Practice of Methods, from Sampling and Recovery to Post-Excavation* Centre for Archaeology Guidelines **2002 01**
- English Heritage (no date) *Dendrochronology – Guidelines on producing and interpreting dendrochronological dates*
- HMSO (1989) Water Act 1989 (Chapter 15)
- Institute of Field Archaeologists (1999) *Standard and Guidance for an Archaeological Watching Brief*
- Jarvis *et al* (1984) *Soils and Their Use in Northern England* Soils Survey of England and Wales Bulletin No. **10**
- Northern Archaeological Associates (2003) *Kexby, Near York. Cultural Heritage Appraisal.* Unpublished NAA report
- Watkinson and Neal (1998) *First Aid for Finds*

Maps

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|------|----------------------------------|--|
| 1977 | British Geological Survey | Geological Survey Ten Mile Map. South Sheet: Quaternary. 1st Edition |
| 1979 | British Geological Survey | Geological Survey Ten Mile Map. South Sheet: Solid. 3rd Edition |
| 1983 | Soil Survey of England and Wales | Soils of England and Wales 1:250 000 Map Sheet 1: Northern England |



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Figure 1 Kexby Wastewater Treatment Works: site location

