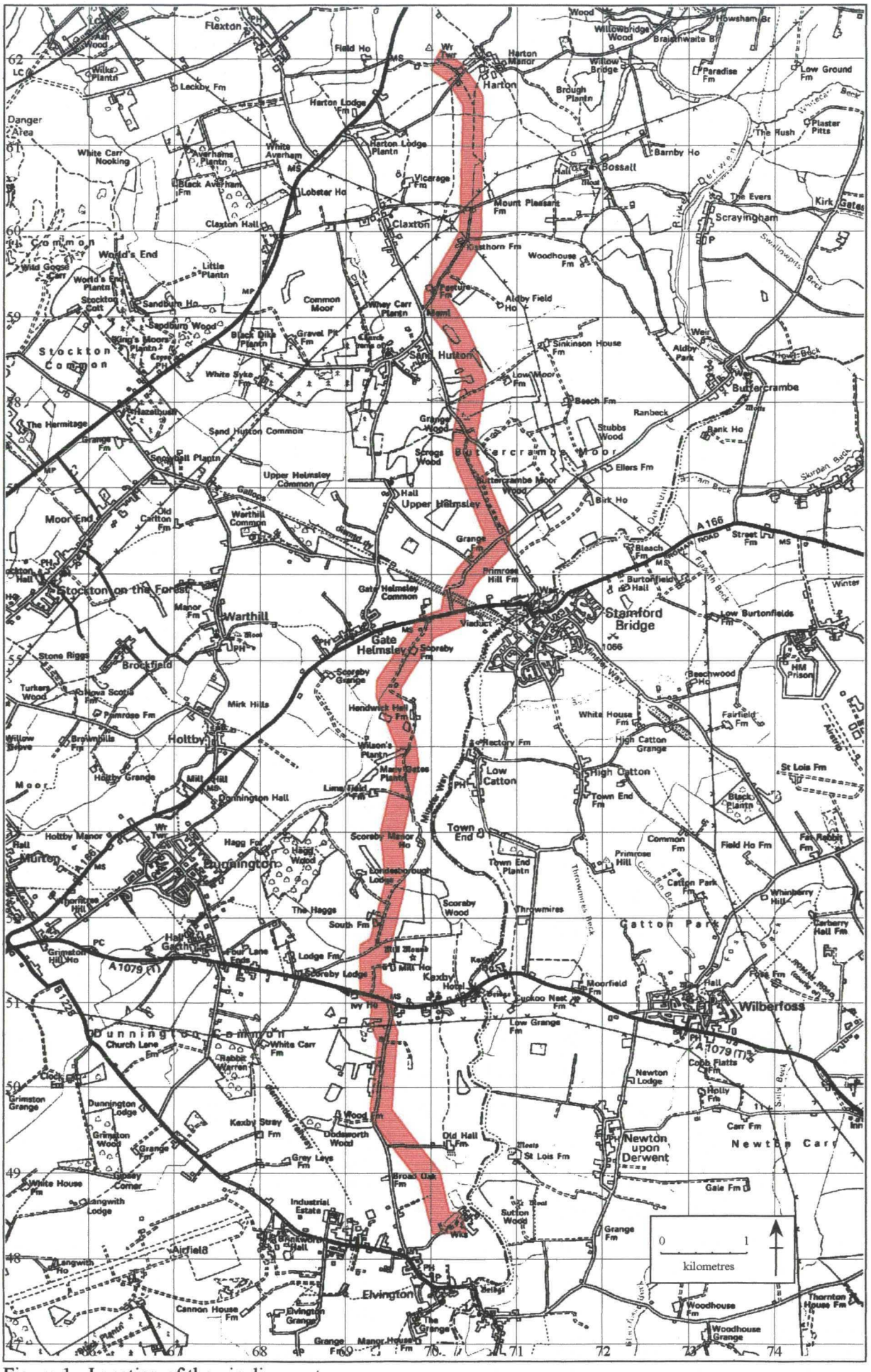


Figure 1. Location of the pipeline route.

Reproduced from the 1994 Ordnance Survey 1:50,000 map with the permission of The Controller of Her Majesty's Stationery Office © Crown Copyright. OSA 25A Milton Street, York. AL52132A0001

The structure of this report will adhere to the following format:

Section 1: outline of the methodology of the various stages of fieldwork.

Section 2: quantification and description of the fieldwork results by location, including an initial assessment of potential of each location, and recommendations for further action.

Section 3: an overview of the implications of the archaeology from the entire pipeline, and research design to address potential themes for further analysis.

Section 4: resources and programming - timetable for the work to be completed, the allocation of resources in terms of time, staff and equipment, and an initial assessment of the budgetary implications.

1.2 Desk-top Evaluation

Archaeological work on the pipeline project began with a Desk-top Evaluation of the available written, cartographic and photographic evidence. This work was carried out by Nick Pearson and Guy Hopkinson of ***On-Site Archaeology***, and has been produced as a separate report. Due to the short lead-in time of the project, this report was produced in two phases. An initial assessment of the route was prepared, which provided a cursory examination of the potential archaeology along the pipeline corridor. This highlighted a number of areas of particular archaeological potential present along or in close proximity to the proposed pipeline, and in a number of instances the route was altered to avoid unnecessary archaeological damage. The second phase of the desk-top report comprised a more detailed assessment of the route, and was begun before pipe laying commenced, but finished at the same time as the topsoil strip was underway.

The information used in the preparation of the desk-top report was primarily from the Sites and Monuments Registers and aerial photographs held at York City Council and North Yorkshire County Council, and to a lesser extent material from published sources, such as academic journals. The desk-top report recommended that archaeological observation would be necessary along the entire pipeline route, and particularly relevant at those locations identified as being of high archaeological potential. Where a particular location was noted in the desk-top report, this will be recorded in the relevant text in Section 3 below, with particular reference to the features actually encountered in the field.

1.3 Field Walking.

A field walking exercise was undertaken in advance of the topsoil strip in May of 1997, at the same time as the desk-top evaluation was being prepared. The detailed results of that exercise are included as an appendix to this report. The results, however, were generally of little use, primarily due to the time at which the exercise was undertaken and

the agricultural regime in place over much of the pipeline route. Virtually all the fields along the route were either under pasture or various cereal crops. It was clearly impossible to view anything other than extant earth-works in the pasture fields, while observation and collection of artefacts in those fields containing maturing cereals was also very difficult. In a limited number of fields containing cereal or vegetable crops at an early stage of maturation surface collection was possible, although in none of these cases were areas of particular archaeological significance predicted on the basis of this collection. Two locations did, however, produce isolated flint tools.

1.4 Geophysical Survey

A geophysical survey was commissioned at the same time as the field walking was taking place, the results of which have been compiled as a separate report. As with the field walking project, the value of the geophysical survey was diminished by the timing of the work. Maturing crops prevented the tracking of the equipment at ground level, leaving only areas of pasture where the survey could achieve its full potential. As a result only discrete lengths of the pipeline route were surveyed.

1.5 Topsoil Removal and Excavation

Due to the limited success of the field walking and geophysical surveys, observation of the topsoil strip was considered to be the most appropriate method for undertaking an effective evaluation of the presence of archaeological deposits along the pipeline corridor. A team of archaeologists was therefore recruited, the size of this team varying in accordance with the number of machines engaged in topsoil removal. Despite the logistical problems arising through fluctuating numbers of machines, and two separate contractors working on the topsoil strip, an archaeologist was present at virtually every location while the initial strip occurred.

The methodology applied to the archaeological observation of the topsoil strip was similar to that used on the Nun Monkton to Elvington pipeline of 1996. A corridor measuring 15 metres in width was designated by the engineers as sufficient to lay the pipe, track machinery and leave linear spoil heaps. Because the land was to be returned to its original use after the pipe had been positioned, topsoil removal was undertaken using 360 degree tracked excavators which were better able to avoid mixing topsoil and subsoil. Inadvertent mixing of the two soils would have left the contractors open to claims for compensation from the farmers.

The careful removal of material down to the topsoil/subsoil horizon provided, in most cases, the perfect scenario for the archaeologists. All of the important deposits and cut features were most readily observed at this interface, and the choice of machine used (rather than bulldozers) enabled the observation of the ground before any archaeological material was obscured by track marks. Only after this had been achieved were other vehicles permitted to track over the surface. Only in areas were considerable alluvial

deposition had occurred was this method unsuccessful, as the topsoil strip did not penetrate far enough to reveal any possible archaeological deposits. This occurrence was however unavoidable.

In most cases where archaeological features were observed, they were recorded and described in field notebooks and surveyed using an Electronic Distance Measurer. In this way, in the majority of cases, it was possible to carry out proper and effective archaeological monitoring and recording without hindrance to the pipe laying process.

In one case, however, the complexity of the archaeological features was deemed to warrant protecting for later excavation work, while the remainder of the topsoil strip continued elsewhere. The area in question was fenced off while a narrow strip to one side was rapidly excavated to enable pipe laying to pass through the area. It was obviously necessary for machines to track along the area of interest while pipelaying proceeded through this adjacent narrow strip. The area of archaeological interest was, therefore, covered with terram and spoil in order to protect it from the damage that would otherwise have been caused by the machine tracks. Once the pipe had been placed through the narrow strip which had been previously examined, the remaining width of the easement at this location was available for a more thorough archaeological examination. The protective spoil and terram covering were removed, and a 360 machine was employed in removing the rest of the material down to a horizon where the archaeological material was visible.

2.0 RESULTS BY LOCATION

2.1 Introduction

This section of the report details the results of the topsoil monitoring, these being listed in a linear manner from north to south, starting at Harton water tower and concluding at the Elvington water treatment works. Each location will be reported as an individual item.

In each instance a site description will be given, and a **factual account** of what was observed will be recorded. This will be followed by a **statement of potential** and details of **recommendations for future action**. The section will conclude with a breakdown of the **Programme of Works** which will be required in order to complete the above analysis. This Programme of Works will include an itemised list of all tasks that are required to be undertaken, by whom, and with an estimate of the time and resource implications.

In all cases the recommendations for future action will include elements from the following list:

2.1.1 Archive Preparation

This is an essential aspect of the process of analysing the data from any archaeological site. The volume of work required for each location will obviously be determined by the extent, nature and complexity of the features discovered. The following general principles, however, apply in all cases:

The archive will comprise all the data gathered during field work, and will be quantified, ordered, indexed and internally consistent. This archive represents the original record of the project's results, and will not be amended even when subsequent research suggests varying interpretations and conclusions from those postulated at the time of field work. If at this, or any subsequent stage in the project, material is discarded from the archive, this fact will be recorded.

The first objective in assembling the archive is to preserve the integrity of the primary field record. It will be maintained in optimum conditions to ensure the physical survival of the records, ecofacts, artefacts and other specimens. It will contain, where relevant, the following elements:

- copies of correspondence relating to the field work
- survey reports (e.g. borehole, geophysical, documentary)
- site notebooks/diaries
- original photographic records

- site drawings (plans, sections, elevations)
- original context records
- full site Harris-matrix - all stratigraphic relationships will be cross checked and the stratigraphic sequence of the site firmly established
- artefacts, ecofacts and any other sample residues
- original finds records (e.g. registered finds, bulk finds, artefact dating catalogues)
- records of conservation and x-rays undertaken during field work
- original sample records
- computer discs and printout

Catalogues and other records

The archive will also contain material derived from the work done during the analysis phase, and will comprise: stratigraphic/structural, artefact, environmental and other catalogues, and all other records, as well as details of the methods and selection strategies used in each case. Each separate data group will be cross-referenced to related data groups and also to the final publication, and if necessary to a general context concordance. These will be supplemented by indices to allow users maximum accessibility to the contents. It will contain, where applicable, the following elements:

- context information: recording (on duplicate copies) any amendments to original field records resulting from analysis
- photographic catalogue: details of all photographs taken as part of analysis
- photographs: photographs taken as part of analysis
- stratigraphic drawings: any amended versions (on duplicate copies) of original site plans and sections, cross-referenced to earlier versions
- object catalogues: details of items selected for analysis, publication and record drawings, and the location of objects
- object drawings: object drawings undertaken as part of analysis either as record drawings or for publication
- x-ray catalogue: details of all x-rays taken as part of analysis, cross-referenced to object catalogue
- x-rays: x-rays taken as part of analysis, cross referenced to objects

- conservation records: details of conservation undertaken during analysis, cross-referenced to conserved objects
- sample catalogues: details of samples selected for analysis
- animal bone catalogues: details recorded for analysis

Text records

The archive will also include report text derived from the above material, which will form the basic text from which the final publication will be prepared. This will comprise:

- site narrative: an interpretative structural and stratigraphic history of the site, illustrated by maps, plans, elevations and sections.
- Artefact reports: the full text, accompanying data and illustrations relating to those artefacts selected for analysis.
- Environmental reports: the full text, accompanying data and illustrations relating to environmental specimens selected for analysis.

2.1.2 Inclusion in the Sites and Monuments Register (SMR)

This pipeline comprised a randomly selected corridor through the hinterland of the City of York, and resulted in the recovery of archaeological evidence which requires full inclusion in the appropriate Sites and Monuments Registers for both the City of York and the County of North Yorkshire.

It is therefore proposed that attention will be given to preparing and submitting a full entry to the appropriate Register for each of the locations described below.

2.1.3 Publication in relevant academic journal

It is proposed that the results of the analysis of this project should be published initially in the appropriate academic journal, which is likely to be either *Britannia*, the *Yorkshire Archaeological Journal* or the *Archaeological Journal*. It is anticipated that the nature of publication will consist of a series of short notes relating to the isolated features, with a more detailed and substantial report being submitted for the more complex Romano-British site at Mill House Farm, Kexby. Attention will be given to cross-referencing the data with other sites of a similar period in the region which are currently under academic scrutiny.

2.1.4 Publication with other sites discovered as a result of the activities of Yorkshire Water plc.

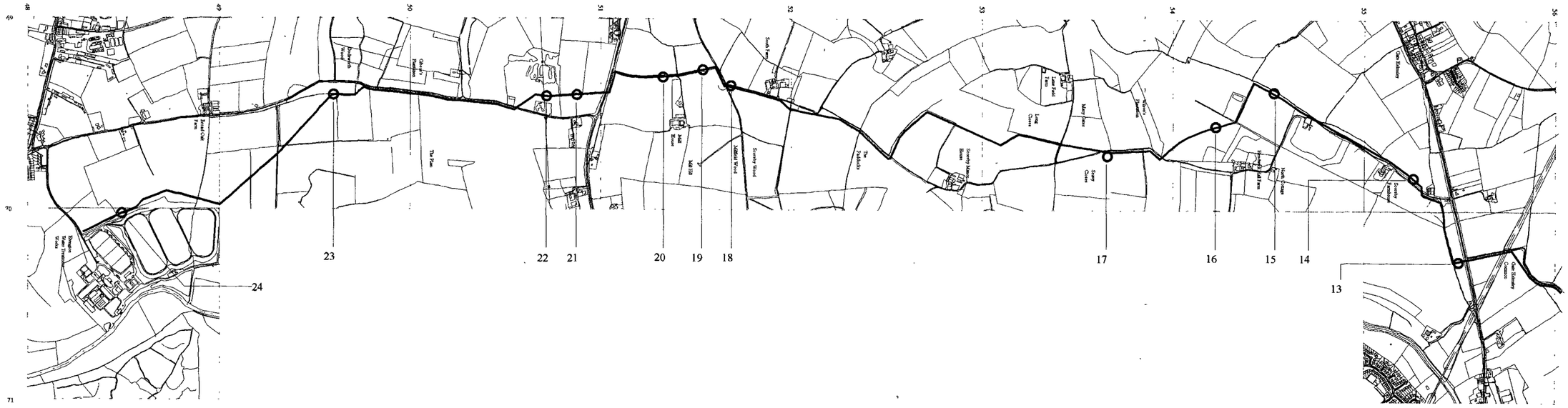
This pipeline has been only one of a number initiated by Yorkshire Water over the last few years which have resulted in the discovery of numerous previously unknown archaeological sites, in a region which has previously been lacking in archaeological

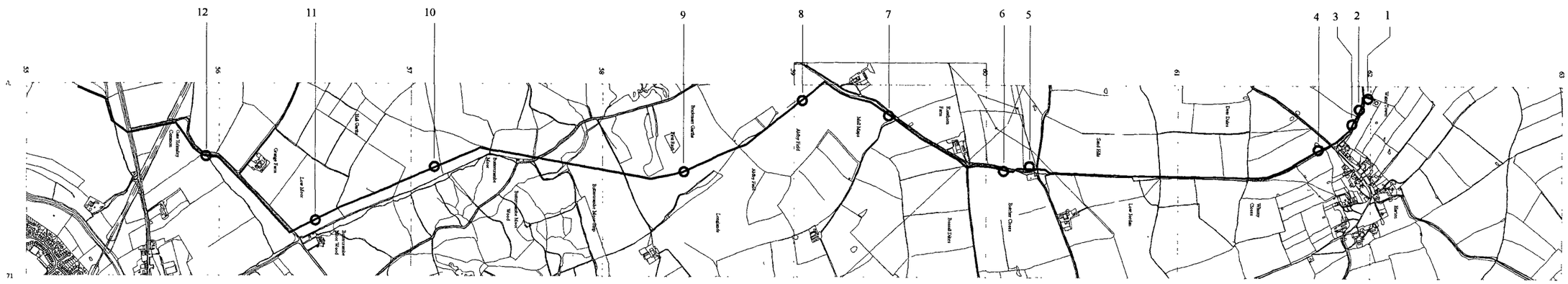
investigation. It is proposed that an overall publication of the results of this and previous pipelines would be merited for a number of reasons. Firstly, it is likely that publication in academic journals, while extremely worthwhile in its own right, will not lead to an understanding within the wider community of the role that was taken by Yorkshire Water, nor will it lead to the wider dissemination of archaeology to the general public. It is also felt to be important that the fact that Yorkshire Water were able to allow for the detailed recording of certain sites after the insertion of the pipe should be recorded in published form. This approach is somewhat unusual, and while it clearly goes beyond the statutory requirements, was a very pragmatic approach resulting in benefits to both the engineers and to the archaeologists. It was possible, through this methodology, to fully excavate the extent of the site at Kexby within the limits of the pipeline corridor in a manner more akin to a fast track research excavation rather than limited salvage work.

The format of such a publication has not yet been considered in detail, however, the general intent should be the wider dissemination of the data to a lay audience. Attention should therefore be given to clarity, brevity and the use of quality colour illustrations and photographs. It is possible that such a document could be produced in a format which would correspond with the current range of promotional literature that Yorkshire Water already produces, and/or in a form which would be compatible with inclusion in the company's Annual Report.

2.1.5 Archive Deposition

In all cases the site archives will be sorted and prepared for deposition. Archives will conform with the "Guidelines for the preparation of excavation archives for long term storage". (Walker, K. 1990: UKIC Archaeology Section).





ELVINGTON TO HARTON MAIN

Archaeological Locations

0 500 1000

metres

PROPOSED PIPELINE ROUTE

ARCHAEOLOGICAL LOCATION

18 ARCHAEOLOGICAL ITEM NUMBER

Figure 2. Archaeological Locations.

2.2 RESULTS BY LOCATION WITHIN THE NORTH YORKSHIRE COUNTY COUNCIL ADMINISTRATIVE AREA

2.2.1 Introduction

This section itemises those archaeological locations within that part of the route which passed through the area administered by the North Yorkshire County Council. It comprises the northern six kilometres of the route from Harton Water Tower in the north, to the northern side of the A166 just to the east of Stamford Bridge (see Figure 2).

2.3 Location 1. Immediately to the south of Harton water tower (Site Records: Field 1) Figure 3

Accession Code: YORYM.1997.60
National Grid Reference: SE 7006 6200

2.3.1 Site Description: Remnant ridge and furrow plus spread of modern demolition material.

Date: Medieval

Interpretation: Medieval field system

2.3.2 Statement of Potential

None

2.3.3 Recommendations for future action

1. Inclusion in the Shes and Monuments Register. See above Section 2.1.2 and below Task 2.

2.3.4 Programme of Works

In order for the above fiiture action to be completed the following tasks require completion:

Task 1. Preparation of site location plans from the original survey data.

Task 2. Preparation of the Sites and Monuments Register entry. This will be based on the original site records.

Task 3. Upon completion of the above tasks, the site archive will be sorted and prepared for deposition. This will conform whh the 'Guidelines for the preparation of excavation archives for long term storage' (Walker, K. 1990. UKIC Archaeology Section).