



For Approval

**A Specification for an Archaeological Watching Brief
at
M5 Junction 19 to 20 Southbound Climbing Lane (Naish Hill)**

NGR ST 503 755 and ST 473 736

produced by

John Samuels Archaeological Consultants

for

Birse Civils Ltd
on behalf of

Highways Agency
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Summary

The Highways Agency are proposing to build a climbing lane within a scheme length of some 3.4km between National Grid References (NGR) ST 503 755 and ST 473 736, located on the western side of Bristol, in the district of North Somerset (formerly part of the County of Avon). The proposed climbing lane begins at the end of the southbound on-slip road from Junction 19 and terminates c.100m south of the Naish Hill Overbridge. The work in connection with the scheme will be undertaken within Highways Agency land, and the majority of the widening will occur within land that has already been disturbed by the construction of the original motorway.

Oxford Archaeology (OA) was commissioned by Hyder Consulting Limited (Hyder) to determine the cultural heritage implications of the proposed M5 Junction 19 to 20 Southbound Climbing Lane (Naish Hill). They have identified an area of potential impact on undisturbed land where it is proposed to create a wetland treatment and attenuation facility.

It is proposed that the area in which the wetland treatment and attenuation facility is to be constructed is the subject of an archaeological watching brief.

This document has been written by John Samuels Archaeological Consultants, detailing the proposed methodology for undertaking the archaeological fieldwork. It is subject to consultation with the North Somerset Archaeological Officer.

1.0 Introduction

Site Location and Description

- 1.1 The Highways Agency are building a climbing lane with a scheme length of some 2.7km between National Grid Reference (NGR) ST 503 755 and ST 473 736, located on the southbound section of the M5 motorway between Junction 19 and 20 at Naish Hill in North Somerset (formerly part of the County of Avon). The proposed scheme begins at the end of the southbound on-slip road from Junction 19 and terminates c.100m south of the Naish Hill Overbridge (see Figure 1).
- 1.2 The work in connection with the proposed scheme will be undertaken within Highways Agency land, and the majority of the widening will occur within land that has already been disturbed by the construction of the existing motorway, which was constructed during the 1970's.
- 1.3 In an earlier stage of the project, Oxford Archaeology (OA) was commissioned by Hyder Consulting Limited (Hyder) to determine the cultural heritage implications of the proposed climbing lane along the existing carriageway of the M5 towards Junction 20. The results of this can be found in '*M5 Junction 19 to 20 Southbound Climbing Lane (Naish Hill), Environmental Statement Volume 2 (ES Vol.2)*'.
- 1.4 They have identified an area of potential impact on undisturbed land where it is proposed to create a wetland treatment and attenuation facility between chainages c10980 - 11090.
- 1.5 The area of undisturbed ground has been assessed as having the potential for the survival of archaeological remains. In paragraphs 2.2 and 2.4 of ES Vol.2, it is stated that during the excavation of Test Pit 413, an in-situ topsoil was recorded over an in-situ subsoil, possibly an old plough soil. This overlies an apparent in-situ sandy clay, of an alluvial nature (c0.3 to 0.4m below current ground surface), and of uncertain depth. The presence of this old plough soil suggests that any archaeology, which lies above the alluvium, may be truncated. Any archaeology below and within the alluvium would be better preserved and may still be waterlogged.

Aims

- 1.6 The aims of this watching brief are:
 - i to identify, and make an appropriate record of, archaeological remains revealed by excavation, with particular attention to the alluvial layers which have the potential to contain evidence from Iron Age or earlier, buried within or below them;
 - ii to ensure the long-term survival of the information contained in such remains

- through archaeological recording prior to their physical destruction; and
- iii to prepare a report and deposition of a project archive.
- 1.7 Should any significant remains be identified, an additional set of aims are in place to deal with them. These are:
- i to assess the nature, date, density, extent, function and state of preservation of archaeological remains;
 - ii to assess their potential for answering questions about the development of land use in the region; and
 - iii where remains of are of sufficient importance, in liaison with the North Somerset Archaeological Officer, to formulate a strategy designed to determine the best method for mitigation.
- 1.8 This specification conforms to the requirements of *Planning Policy Guidance: Archaeology and Planning* (DoE 1990) (PPG1 6). It has been designed in accordance with current best archaeological practice and the appropriate national standards and guidelines, including:
- i *Management of Archaeological Projects* (English Heritage, 1991);
 - ii *Model Briefs and Specifications for Archaeological Assessments and Field Evaluations* (Association of County Archaeological Officers, 1994);
 - iii *Code of Conduct* (Institute of Field Archaeologists, 2000); and
 - iv *Standard and Guidance for Archaeological Watching Briefs* (Institute of Field Archaeologists, 1999; rev. 2001).

2.0 Watching Brief Methodology

- 2.1 It is proposed to undertake a continuous watching brief in the area of the site, as shown in Figure 2.
- 2.2 An archaeological watching brief has been defined as *'a programme of observation and investigation conducted during any operation carried out for non-archaeological reasons within a specified area or site... where there is the possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.'* (IFA, 2001).
- 2.3 The overall objective of the watching brief will be to monitor ground disturbance during the course of the construction of a wetland treatment and attenuation facility, in order to establish whether any archaeological deposits survive within the site, and to ensure their further understanding through excavation, recording and sampling of material of any exposed sensitive areas. This may require limited excavation in order to define the date, extent and importance of any such remains.

Watching Brief Methodology

- 2.4 The watching brief will take the form of supervision by a suitably qualified professional archaeologist to monitor groundworks as they commence and proceed on a continuous basis. It includes the provision for the pausing of groundworks in order to allow for full investigation of any significant archaeological remains. In practice, this will involve:
- i supervision of the removal of topsoil;
 - ii inspection of the topsoil/subsoil interface prior to machine excavation for archaeological features/deposits;
 - iii cleaning, where necessary;
 - iv pre-excavation recording of archaeological features/deposits in plan;
 - v full excavation of features or parts of features/deposits within the area of impact, where necessary;
 - vi post-excavation recording of archaeological features/deposits in section and in plan;
 - vii deposits which appear to have potential of environmental remains will be sampled (see paragraph 2.9 below);
 - viii monitoring of the removal of the subsoil;

- ix inspection of the surface of natural soils for archaeological features/deposits;
 - x pre-excavation recording of archaeological features/deposits in plan;
 - xi cleaning and full excavation of features/deposits or parts of features/deposits within the area of impact, where necessary;
 - xii post-excavation recording of archaeological features/deposits in section and in plan; and
 - xiii deposits which are suitable for environmental investigation will be sampled (see paragraph 2.9 below).
- 2.5 Adequate facilities shall be provided by the developer or agent for archaeological staff to observe earth-moving operations in progress and to facilitate the recording of features, as detailed in paragraphs 2.1 and 2.4 above.
- 2.6 Where identified, excavated archaeological features will be recorded, pre and post-excavation, by measured drawing at appropriate scales (normally 1:20).
- 2.7 All excavated archaeological deposits and cuts will be recorded by single context on standard forms; the system is based upon the Museum of London's *Archaeological Site Manual* (1994).
- 2.8 A photographic record, primarily in colour print, but supplemented by colour slide and black and white print where appropriate, will be maintained during the course of the Watching Brief and will include:
- i the site during work, showing specific stages of fieldwork;
 - ii individual features and, where appropriate, their sections; and
 - iii groups of features, where their relationship is important.
- 2.9 Deposits that contain materials likely to provide useful environmental information, such as waterlogged plant in insect remains, pollen, molluscs, charred plant remains, and small bones, will be sampled. Other samples may be taken for the remains of industrial processes such as hammer scale, microdebitage, for soil micromorphology, or for scientific dating. Advice on sampling will be provided by suitably qualified experts.
- 2.10 Every effort will be made to implement the watching brief without affecting the construction timetable.
- 2.11 If extensive Identified Archaeological Remains, Unexpected Finds, whether

unforeseeable or foreseeable, which are potentially of regional or national significance, are identified, it may be necessary to pause groundworks until a further Archaeological Works report and a further Archaeological Design, to fully establish their character, distribution, extent, condition, dating, and further treatment, has been formulated, in consultation with the North Somerset Archaeological Officer and English Heritage; English Heritage have devolved their responsibility to North Somerset Council. If such remains are discovered, the developer, if deemed necessary, will make reasonable contingency arrangements. If finds are made of gold or silver, these will, if it is possible, be archaeologically removed to a safe place and immediately reported to the local Coroner (within 14 days, in accordance with the 1996 Treasure Act). Should it not be possible to remove the finds that day, suitable security will be provided.

- 2.12 Should archaeological remains be identified within any part of the site and adjacent areas (Discovered Archaeological Remains) other than the identified archaeological areas of the site, they will be protected from damage and clearly delineated to ensure that they are clearly visible to persons carrying out site works. The areas within which the mitigated Archaeological Remains and Sites Retained In-Situ are located shall also be delineated in such a manner as to ensure that they are clearly visible to persons carrying out site works.
- 2.13 Discovered Archaeological Remains shall be recorded in plan by means of an instrument survey and investigated by hand excavation to such an extent as is necessary to confirm their nature and evaluate their importance. Such plans shall be at 1:1000 scale (or larger if necessary to delineate the Discovered Archaeological Remains clearly) and shall show, as a minimum, the location of the Discovered Archaeological Remains, the boundaries of the relevant parts of the site and adjacent areas within which the Discovered Archaeological Remains are located, the extent of the areas stripped, the site grid, and the chainage at 100m intervals.
- 2.14 The North Somerset Archaeological Officer will be given notice of when work is due to commence and will be free to visit the site by prior arrangement.
- 2.15 Any human remains encountered will be cleaned and recorded with minimal disturbance and left in-situ and covered over. Such remains will only be removed if necessary and only once the North Somerset Archaeological Officer has been informed. The contractor will comply with all statutory consents and licences under the Disused Burial Ground (Amendment) Act 1981, or other Burial Acts regarding the exhumation and interment of human remains. The archaeological contractor will comply with all reasonable requests of interested parties as to the method of removal, re-interment or disposal of the remains or associated items. Every effort will be made, at all times, not to cause offence to any interested parties.
- 2.16 Archaeological staff and visitors will respect Health and Safety provisions and site

safety regulations (see Section 5.0).

- 2.17 All artefacts will be treated in accordance with UKIC guidelines, *First Aid for Finds* (Watkinson & Neale 1998). All finds will be bagged and labelled according to the individual deposit from which they were recovered, ready for later cleaning, marking and analysis.
- 2.18 The project archive will follow the guidelines contained in *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990) and *Standards in the Museum Care of Archaeological Collections* (Museums and Galleries Commission 1992).

Post Excavation - Watching Brief

- 2.19 Post excavation work will comprise the following:
- i checking of drawn and written records during and on completion of fieldwork;
 - ii production of a stratigraphic matrix of the archaeological deposits and features present on the site, if appropriate;
 - iii cataloguing of photographic material and labelling of slides which will be mounted on appropriate hangers; and
 - iv cleaning, marking, bagging and labelling of finds according to the individual deposits from which they were recovered. Finds will be identified and dated by appropriate specialists. Any finds requiring specialist treatment and conservation will be sent to an appropriate Conservation Laboratory, subject to a conservation assessment being carried out by an appropriate conservator.
- 2.20 Following completion of fieldwork, a report detailing the project will be produced within six months. The report's final format will depend upon the nature and significance of any archaeology recorded within the site. As a minimum, however, it will contain:
- i a title page detailing site address, site code and accession number, NGR, author/originating body, client's name and address;
 - ii full contents listing;
 - iii a non-technical summary of the findings of the watching brief;
 - iv a description of the archaeological background;

- v a description of the topography and geology of the watching brief area;
 - vi a description of the methodologies used during the watching brief;
 - vii a description of the findings of the watching brief;
 - viii plans of each of the areas showing the archaeological features/deposits exposed;
 - ix sections of the excavated archaeological features/deposits;
 - x interpretation of the archaeological features/deposits exposed and their context within the surrounding landscape;
 - xi specialist reports on the artefactual/ecofactual remains from the site;
 - xii appropriate photographs of specific archaeological features/deposits; and
 - xiii a consideration of the importance of the archaeological remains present on the site in local, regional and national terms.
- 2.21 The report shall also contain a suitable list of contents and a cover page detailing:
- i Site Address;
 - ii Site Code and Accession No.;
 - iii National Grid Reference;
 - iv Author/Originating Body; and
 - v Report Date.
- 2.22 The report will be submitted in both paper copy and digital form.
- Publication and Dissemination
- 2.23 Deposition of the developer report with the North Somerset Sites and Monuments Record will be taken as placing the information within the public domain.
- 2.24 Notes or articles describing the results of the watching brief will be submitted for publication in an appropriate local journal. A copy of any such works will be sent to the North Somerset Archaeological Officer and to the County SMR.
- 2.25 Following consultation with the North Somerset Archaeological Officer, notes or articles describing the results of the watching brief will be submitted for publication

in Transactions of the Bristol and Gloucestershire Archaeological Society.

- 2.26 Should the results of the archaeological watching brief be of sufficient archaeological significance, a Popular Report will be produced. This document will be a publication designed to present the results of the archaeological investigation simply, for a lay audience as described in DMRB Volume 10.

Copyright

- 2.27 *John Samuels Archaeological Consultants* shall retain full copyright of any commissioned reports, tender documents or other project documents under the *Copyright, Designs and Patents Act 1988* with all rights reserved, excepting that it hereby provide exclusive licence to the client for use of such documents by the client in all matters directly relating to the project as described in the project design.

Archive

- 2.28 Following the completion of fieldwork and acceptance of the report by the Local Planning Authority, an ordered archive of both object and paper elements will be prepared. This will conform to 'Site Archive' level as defined in *Management of Archaeological Projects* (English Heritage, 1991), guidelines contained in *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC, 1990), and *Standards in the Museum Care of Archaeological Collections* (Museums and Galleries Commission, 1992), and will be deposited with the North Somerset Museum, Weston-super-Mare, under accession number WESTM: 2005.87. This excludes items of gold and silver, which by law must be reported to Her Majesty's Coroner and any finds that individual landowners may wish to retain.
- 2.29 Should significant remains be discovered during the course of the watching brief, and post-excavation assessment identifies the need for fuller publication, then a secondary research archive will also be prepared, and will be deposited with the North Somerset Museum, Weston-super-Mare.

3.0 Timetable and Personnel

- 3.1 CVs of key personnel will be supplied to the North Somerset Archaeological Officer on request.
- 3.2 It is expected that the watching brief will commence on 5 September 2005 (excavation of the wetland treatment and attenuation facility). Confirmation of the start date will be provided to the North Somerset Archaeological Officer.
- 3.3 Specialist assistance, where required, will be provided by appropriate persons.

Details to be provide on appointment of a fieldwork contactor.

4.0 Insurance

- 4.1 The archaeological contractor will produce evidence of Public Liability Insurance to the minimum value of £5m and Professional Indemnity Insurance to the minimum of £2m.

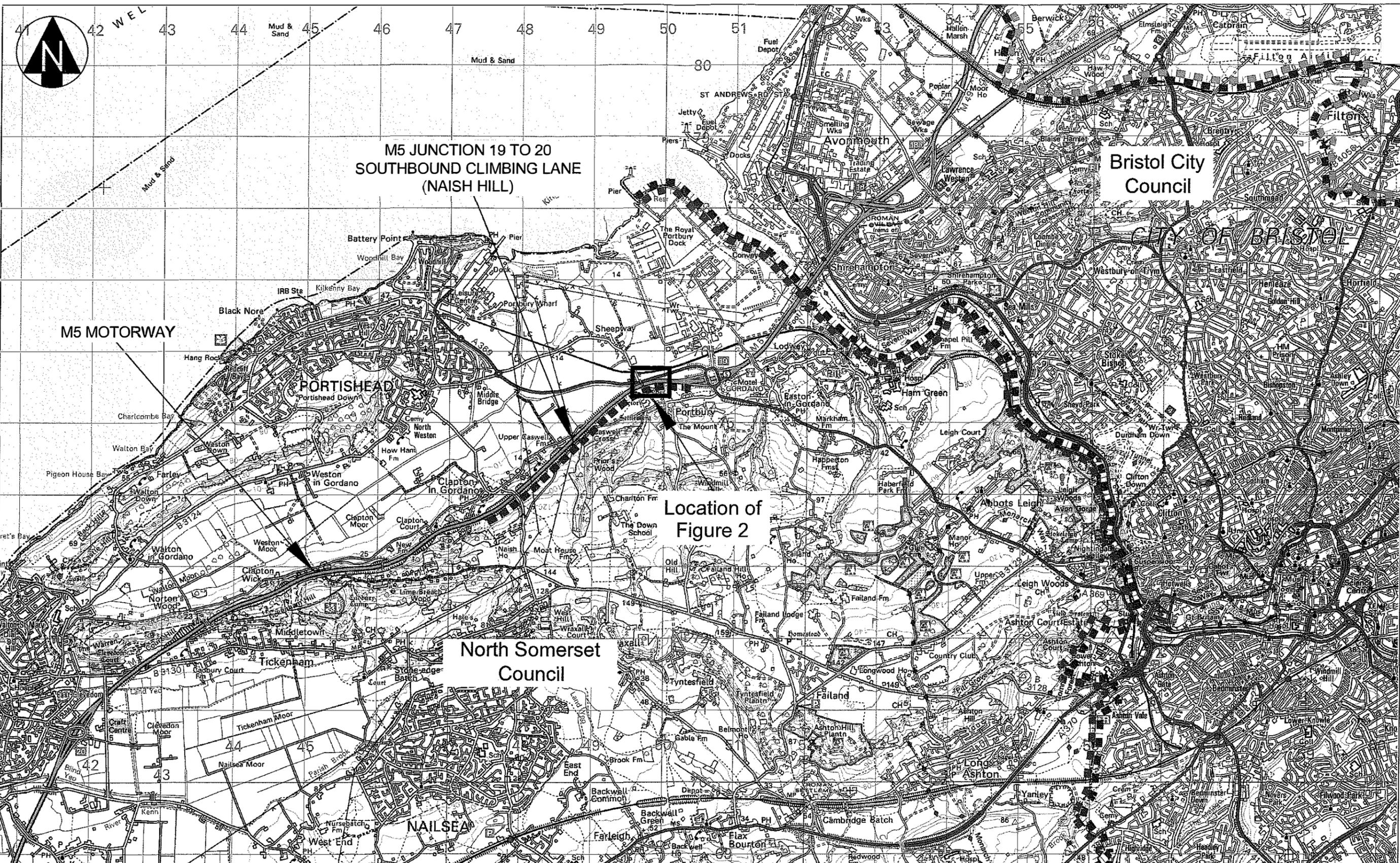
5.0 Health and Safety

- 5.1 It is the policy of John Samuels Archaeological Consultants ('the Employer') to conform fully to the requirements of the Health & Safety at Work etc. Act (1974).
- 5.2 It is accepted that it is the duty of the Employer to ensure, so far as is reasonably practical, the health and safety of all his employees at work.
- 5.3 The employer also has a duty to ensure that his employees are aware of their responsibility for their own health and safety, and for the health and safety of others, including the general public who might be affected by their work.
- 5.4 Where employees are temporarily engaged at other workplaces, they are to respect relevant local regulations, both statutory and as imposed by other employers within the Health and Safety at Work etc. Act (1974).
- 5.5 In furtherance of the duty of care imposed by the Health & Safety at Work etc. Act (1974), the Employer shall make available to his employees whatever reasonable facilities are required by particular circumstances, eg. appropriate protective clothing, safety equipment, rest breaks for specialised tasks, etc.
- 5.6 Attention is paid to the requirements of more recent legislation, including the provision and use of *Work Equipment Regulations* 1992, the *Management of Health and Safety at Work Regulations* 1992, and the *Construction (Design and Management) Regulations* 1994. A risk assessment will be undertaken by the contractor, with copies to *John Samuels Archaeological Consultants*, a safety officer appointed, and all aspects of health and safety nominated during work. It may be necessary for the archaeological contractor to liaise with the main contractor over aspects of health and safety, depending on start dates of contracts etc.

6.0 Figures

Figure 1: Site Location

Figure 2: Area of Wetland Attenuation and Facility.



Location of Figure 2

Key	
	Scheme Extent
COUNCIL BOUNDARIES	
	Bristol City Council
	South Gloucestershire Council
	North Somerset Council

Issue	Description	Auth.	Ckd.	Appd.	Date

OS Licence	
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Scale	Datum
1:50,000	LOCAL

Project	
M5 JUNCTION 19 TO 20 SOUTHBOUND CLIMBING LANE (NAISH HILL)	
Title	
SITE LOCATION	
Project Code	Figure
1541	FIGURE 1

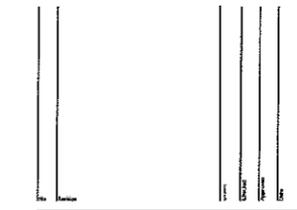
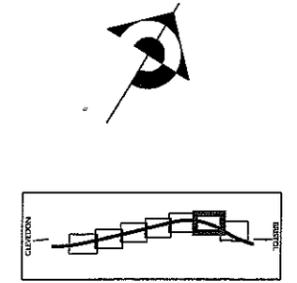
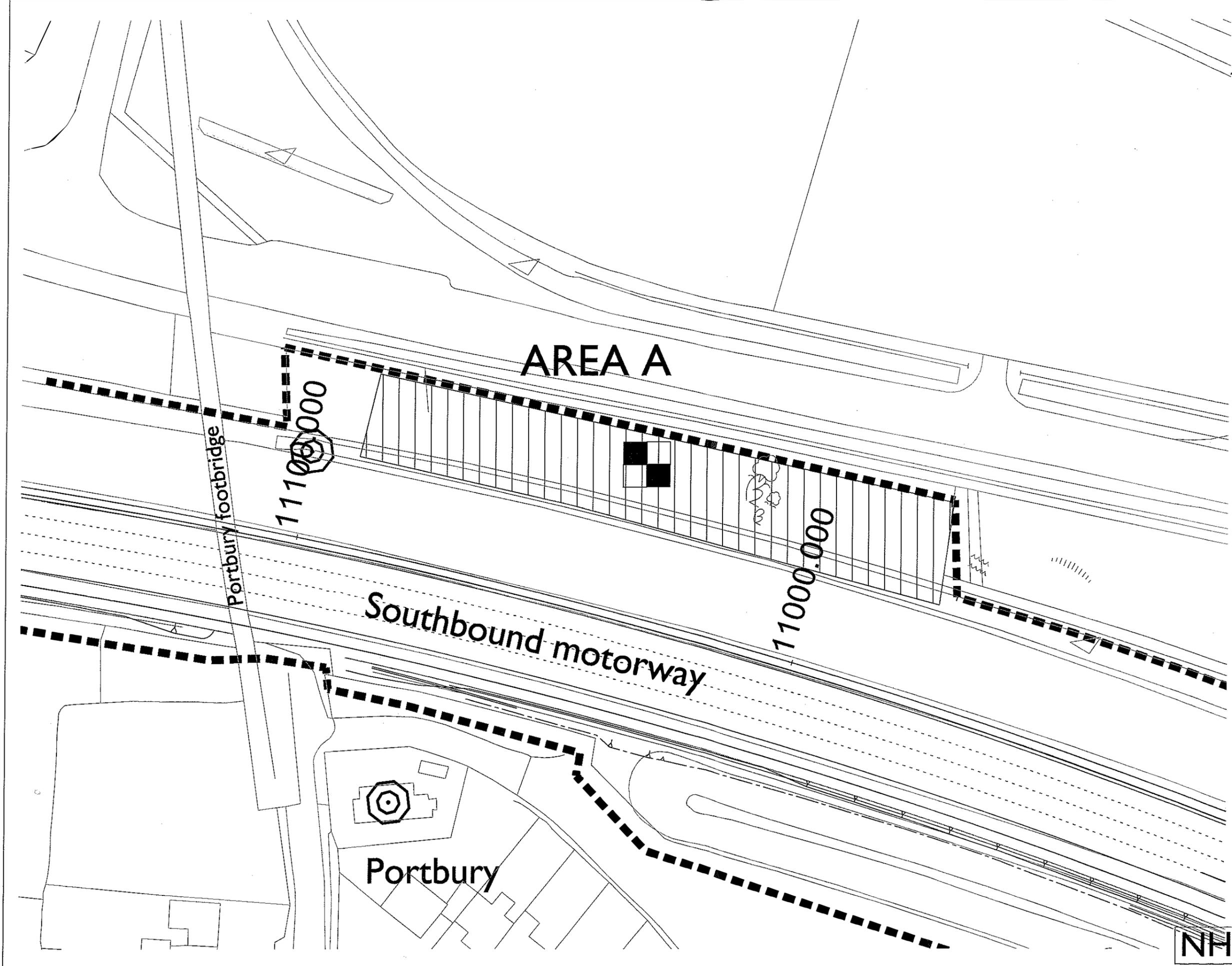
HIGHWAYS AGENCY	
Project Code	Figure
1541	FIGURE 1
Issue	

Do not scale this drawing. All dimensions to be checked on site. This drawing to be read in conjunction with

LEGEND

-  HIGHWAYS AGENCY LAND BOUNDARY
-  WATCHING BRIEF DURING SOIL STRIP
-  ADVANCED TRIAL PIT
-  OTHER HISTORIC SITE

Note:
1. Drawing to be read in conjunction with Archaeological Excavation and Watching Brief Specification.



COOPER PARTNERSHIP

LANDSCAPE ARCHITECTURE ENVIRONMENTAL ARCHITECTURE

ARCHITECTURE

M4/M5 Improvement Schemes
M5 Naish Hill

Area of Treatment Attenuation and Facility

Site: NTS
Drawn: KJ
Date: June 2005
Checked: RM
Approved: SK

Figure 2