

A38 DOBWALLS BYPASS

ARCHAEOLOGICAL DESIGN REPORT - Final

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Archaeological Design Report

1 INTRODUCTION

1.1 General

- 1.1.1 This document sets out a detailed design for the management of cultural heritage resources that may be affected by the proposed A38 Dobwalls Bypass Scheme, and has been prepared in accordance with the A38 Dobwalls Bypass Contract *Works Information* section 6.4.12.
- 1.1.2 The Design addresses the construction, maintenance and monitoring phases of the scheme. It includes undertakings set out in the Environmental Statement (Vol. 1 Section 12.4).
- 1.1.3 The Design is based upon standards contained in DMRB, PPG15, PPG16, CDM Regulations, English Heritage Guidance and the Institute of Field Archaeologists (IFA) Standards and Guidance.

2 REVIEW OF PHASE 1 DESIGN

2.1 Mitigation Strategy

- 2.1.1 The mitigation strategy has been set out in section 12.4 of the Environmental Statement (ES).
- 2.1.2 The aims of the strategy are to:
- Minimise the physical effect of the *Scheme* on the visible and buried cultural heritage resource and archaeology as far as is reasonably practicable;
 - Maximise the positive research benefits to be gained from a structured programme of archaeological investigation;
 - Maximise the positive amenity benefits to be gained from presentation and interpretation of the historic landscape to the public.
- 2.1.3 The archaeological strategy comprises the following elements:
- Archaeological recording of the structure of all important hedgerows that will be breached by the site works (Figure 1; hedgerows H1 to H22 inclusive)
 - Temporary removal and safe storage for the duration of nearby works of the listed milestone adjacent to the existing A38 east of Dobwalls village (Figure 1 site 12); subsequent replacement of the milestone at its original location.
 - A programme of Rapid Open Area Excavations (ROAE) to be undertaken in advance of the main site works within three areas previously defined in the ES as including archaeological remains of more than local potential. This exercise will record any subsoil evidence in areas known to contain magnetic anomalies considered to be of archaeological origin
 - An archaeologist will monitor all other earthmoving works outside the ROAE and record any features or deposits of interest. The archaeological monitoring will include any pre-entry ground investigation works as may be required
 - Detailed reports on the results will be prepared

3 METHODS OF ARCHAEOLOGICAL MONITORING

3.1 Construction Works

3.1.1 Approaches to the archaeological investigation, recording and monitoring of site works have been identified within the ES; the location of these works is shown on Figure 1, as follows.

- Hedgerow recording (boundaries H1-H22 inclusive)
- Temporary removal, storage and ultimate reinstatement of a listed milestone (Site 12)
- Rapid Open Area Excavation (ROAE) within Areas 8, 9 and 12 previously subject to geophysical survey

3.1.2 Groundworks in all other areas will be the subject of an archaeological watching brief.

3.2 Hedgerow Recording

3.2.1 Hedgerows identified in the ES as being of historical importance, and which will be removed in whole or in part by the site clearance works will be investigated by the excavation of a single 2m-wide trench through each hedge bank (and any associated ditch) prior to removal. The selection of the exact location of the excavation site will be determined on site by the Project Archaeologist in consultation with the Project Ecologist and the *Project Manager*.

3.2.2 The aims of the work are:

- to record the method of construction of the bank;
- to recover any artefactual evidence that may provide a date for its construction/modification; and
- to recover any palaeo-environmental evidence (from buried soil horizons or ditch silts that may yield information about the environmental development of the historic landscape.

3.2.3 A digital photographic record and basic measurements of affected lengths of hedgerow will be undertaken prior to the commencement of excavation.

3.2.4 The excavation of the 2m bank section will be undertaken by mechanical plant under archaeological supervision supplemented by hand excavation where necessary. The recording methods to be used are set out in Section 3 below.

3.2.5 Spoil from the excavation will be set aside for general clearance.

3.3 Removal, Storage and Replacement of Listed Milestone

3.3.1 The listed milestone Site 12 is in close proximity to proposed construction work, and to avoid the possibility of accidental damage during site works it is proposed that – subject to listed building consent (LBC) – it will be removed and taken into temporary storage. Its present condition and location will be recorded prior to removal. A detailed method statement will accompany an application for LBC. The nature of any foundation deposits is presently unknown, and a methodology for its replacement and

resetting will be agreed with the local authority's Conservation Officer once its present foundation design has been established.

3.3.2 Prior to any work being carried out in the area, a detailed condition survey and photographic record will be made of the milestone. Its location will be recorded to an accuracy of better than 100mm.

3.3.3 Excavation by hand to expose the full extent and depth of any foundations will be undertaken by hand. The stone will be wrapped in foam and under archaeological supervision secured on a pallet or within a crate and transported to a secure compound for storage for the duration of the works.

3.3.4 On completion of nearby works, the stone will be returned and replaced in its original position with foundations meeting the approval of the local authority's Conservation Officer.

3.4 Rapid Open Area Excavation (ROAE)

3.4.1 Areas for Rapid Open Area Excavation (ROAE; also known as *Strip, Map and Sample*).

3.4.2 The aims of the work are:

- Stage 1 - to identify, in a controlled manner, any subsurface archaeological remains that may exist on the site and which will otherwise be removed and/or damaged by site works; and
- Stage 2 - to record the presence of any archaeological remains.

3.5 Stage 1

3.5.1 The areas that are to be stripped of topsoil will be excavated under archaeological supervision. This will involve the removal of the topsoil by use of a mechanical excavator equipped with a toothless grading bucket under the constant supervision of the Project Archaeologist.

3.5.2 The machine excavation will continue down to the top of the archaeological deposits or the surface of the subsoil, whichever is encountered first. When the appropriate depth is reached the use of mechanical plant will cease. The area will then be hand cleaned by the Project Archaeologist (where lack of definition makes this necessary) in order to identify any archaeological features or layers that may be present, and a plan of the site at a scale of 1:100 will then be made in accordance with Section 4 of this document.

3.5.3 On completion of the plan the Project Archaeologist would advise the *Project Manager* over the need for further archaeological excavation. The Project Archaeologist will keep the Cornwall County Council Archaeologist informed on the proposed level of archaeological response.

3.6 Stage 2

- 3.6.1 All archaeological features and deposits to be excavated (in accordance with Section 4 of this document.) will be excavated by hand by the Project Archaeologist and to the following sample levels:
- 100% for ritual, funerary or industrial activity,
 - 25% of linear features with non-uniform fills, and
 - 10% of linear features with uniform fills.
- 3.6.2 All linear feature intersections, overlaps and terminals will be excavated. Where human remains are encountered they will wherever possible be left in situ; where this is not possible, they will be removed following receipt of, and in accordance with, a licence issued from the Home Office.
- 3.6.3 All deposits with palaeo-environmental potential - containing carbonised and/or waterlogged remains - will be bulk sampled as appropriate and in accordance with English Heritage Guidelines (English Heritage 2002).
- 3.6.4 The selection of suitable deposits for sampling will be determined by the Project Archaeologist. Consultation with the English Heritage Regional Scientific Officer will be sought as appropriate. Palaeo-environmental samples will be processed (sieved) as far as possible during the site investigations, or immediately following completion on site.
- 3.6.5 Suitable carbonised (or other) material will be identified and sampled for radiocarbon dating. Other deposits will be identified that may provide suitable material for thermo-remnant archaeo-magnetic dating.

3.7 Watching brief

- 3.7.1 Within all other areas where topsoil and subsoil removal will take place the approach to archaeological mitigation will be by archaeological monitoring (*watching brief*).
- 3.7.2 The aims of the work are:
- to identify any subsurface archaeological remain that may exist on the site and which will otherwise be removed and/or damaged by site works;
 - to rapidly record the presence of any archaeological remains.
- 3.7.3 The Project Archaeologist will be present during all soil removal to record the exposure of subsoil. If there are no archaeological features, deposits or artefacts present then monitoring will cease in that area. Should there be any deposits of interest then these will be recorded in accordance with Section 4, where practicable, without any delay to the progress of the site works. Only in exceptional circumstances, where significant deposits are located would it be necessary, in consultation with the *Project Manager*, to cause any delay to the progress of the site works.

4 METHODS OF ARCHAEOLOGICAL RECORDING

4.1 General

4.1.1 All artefacts or deposits revealed will be recorded using the standard AC archaeology pro-forma recording system, comprising written, graphic and photographic records, utilising a recording system that meets the approved standards of English Heritage. All archaeological staff will operate under the terms of the IFA Code of Conduct.

4.1.2 More specific details follow:

- Site plans will be drawn at 1:100 or 1:50 (and linked by total station survey to the national grid), detailed feature plans will be drawn at a scale of 1:20 and detailed sections at 1:10 or 1:20;
- all site levels will be related to Ordnance datum;
- all metal finds and other typologically distinct or closely dateable finds will be recorded three-dimensionally;
- an adequate photographic record of all archaeological deposits will be made in both plan and section. This will comprise digital photographs and colour transparencies (on 35mm film), illustrating in both detail and generally the principal features and finds discovered. The photographic record will also include working shots to illustrate more generally the nature of the archaeological operation mounted. The transparencies will be mounted in suitable frames. A photographic scale and north arrow will be included in the case of detailed photographs.

4.2 Handling of finds

4.2.1 Modern finds (i.e. post 1850) will only be kept to confirm the date of selected deposits prior to discard. All post-Medieval and earlier artefacts, other than bulk ceramic building material, will be retained.

4.2.2 All artefacts recovered will be washed (where the condition of the material allows) and marked. Finds will be bagged, boxed, labelled and stored in accordance with current UKIC guidelines as set out in *Guidelines for the treatment of finds from archaeological sites*. Appropriate separation of bulk finds from those small or delicate objects requiring special treatment or packaging will be maintained.

4.2.3 Conservation work to stabilise fragile items will be undertaken by Wiltshire County Museum Services Conservation Laboratory, Salisbury.

5 PREPARATION AND ASSESSMENT OF THE SITE ARCHIVE

5.1 Site Archive

5.1.1 Following completion of the monitoring of the site construction works an archaeological archive will be prepared to the specification set out in Appendix 3 of MAP2 (English Heritage 1991). The site archive will contain all the data collected during the fieldwork including records, finds and environmental residues. It will be quantified, ordered, indexed and internally consistent.

- 5.1.2 An assessment of the project archive will be undertaken in accordance with Appendix 4 of MAP2 (English Heritage 1991) and an Updated Project Design (UPD) prepared in accordance with Appendix 5 of MAP2. The following task list sets out the principal activities to be undertaken in preparation of the assessment report:
- A quantification of the site archive and specialist comment, where appropriate, on the importance and potential of the archive for further analysis
 - Preparation of detailed method statements for undertaking further analysis
 - Detailed proposals for an **Academic Report** and, where results allow, a **Popular Report** (see section 6)
- 5.1.3 Once confirmation is received of the landowner's intent to donate finds, and in accordance with the Treasure Act 1996, an agreement with the relevant museum (The Royal Cornwall Museum, Truro) to accept any artefacts/archive will be finalised. An accession number will be obtained from the recipient museum prior to commencement on site.
- 5.1.4 The archive will be prepared and deposited within one year of completion of the project. In accordance with the Society of Museums Archaeologists document Selection, Retention and Dispersal of Archaeological Collections (1993), it is proposed that following suitable analysis, undiagnostic, poorly provenanced or bulk material will be discarded (either by outright disposal, or dispersal to reference or teaching collections). Discard arrangements will be set out in the Assessment Report.
- 6 REPORTING**
- 6.1.1 The results of the assessment will be set out in an *Assessment Report*, to be prepared by the Project Archaeologist within six weeks of completion of the monitoring the site works. The *Assessment Report* will set out detailed costed proposals, for approval by the *Project Manager*, for final stages of archaeological works and include:
- 6.1.2 A detailed proposal for the preparation of an Academic Report. This will comprise, as a minimum, the preparation of a short note on the circumstances and nature of the project for publication in the Cornish Archaeology, the county archaeological journal, within one year following completion of the site work.
- 6.1.3 If the results of the assessment indicate that further analysis is required then a detailed *Academic Report* will be prepared for publication in the Cornish Archaeology, or a national period journal, as appropriate.
- 6.1.4 If the assessment indicates that the archaeological results are of sufficient interest to merit inclusion in a *Popular Report* a detailed proposal will be provided either as a 'stand alone' report for educational and local community circulation, or as part of a more general information package that the *Project Manager* may wish to provide for the *Scheme* as a whole for local/regional release.

7

REFERENCES

DMRB 1993, Volume II Section 3 Part 2 (*Cultural Heritage*) of the '*Design Manual for Roads and Bridge*'. Dept of transport June 1993

English Heritage 1991 '*Management of Archaeological Projects*'(MAP2)

English Heritage 2002 '*Environmental Archaeology – 'A guide to the theory and practice of methods, from sampling and recovery to post-excavation'*

PPG15, 1995 '*Planning and the Historic Environment*' Dept of Environment Guidance note 15

PPG16, 1990 '*Archaeology and Planning*' Dept of the Environment Guidance note 16

APPENDIX A

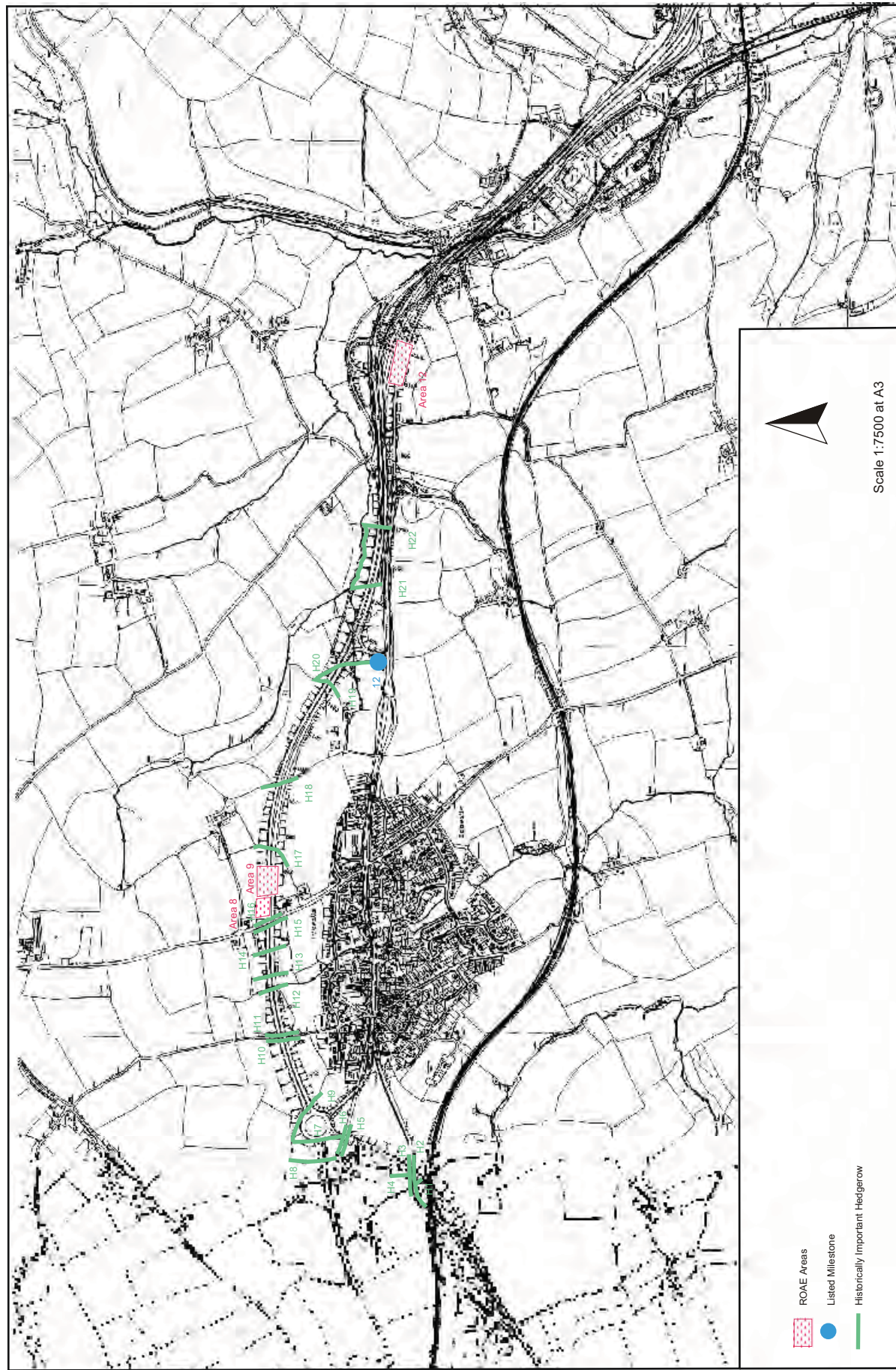


Fig. 1: Dobwalls Bypass: Preliminary Archaeological Works