

# **CARLISLE NORTHERN DEVELOPMENT, ROUTE, CUMBRIA**

**Archaeological Evaluation  
Parcel 47  
Project Design 017 (rev 001)**

June 2008

NGR: NY 338292 558419



## 1 BACKGROUND

### 1.1 INTRODUCTION

- 1.1.1 Cumbria County Council propose to construct a new road around the western edge of Carlisle referred to as the Carlisle Northern Development Route (CNDR); the route extends around the western and northern side of Carlisle from Greymoorhill North bridge in the north to Newby West in the south.
- 1.1.2 This document is the project design for evaluation by trial trenching in land Parcel 47 (NY 338292 558419) as identified on Drawing No 42605/05/49/Am4, as part of a programme of evaluation by trial trenching to be carried out in all land parcels omitted from the initial evaluations of the proposed route as detailed in a brief produced by Cumbria County Council's Historic Environment Service (CCCHES). Parcel 47 lies within the former gardens of Kingsmoor House, to the north of the C1106 Cargo Road and to the east of the West Coast Main Line.
- 1.1.3 Investigation of eighteenth century plans revealed the area once contained formal gardens including our square *parterres* of moderate size which, from comparable sites of the period, could have been box edging enclosing spaces filled with herbs, flowers and possibly vegetables. A second area shows a larger area of hedging enclosing eight compartments on a 'Union Jack' plan, possibly a 'wilderness'. Archaeological investigation of these areas may establish the planting of trees and the species of shrubs and trees used. It may also be possible to obtain more information about three features at the intersections, and, desirably, a record of the gardeners house and summerhouse, also shown on the maps.

### 1.2 GEOLOGY AND TOPOGRAPHY

- 1.2.1 The topography through which the road scheme passes, particularly to the south of the River Eden, consists of relatively uniform undulating terrain, predominantly in use as pasture and arable fields, which are bounded by tall and thick hedge-rows. The river bisects the route of the road; to the north of the river, the route crosses the Eden flood plain and river terraces, immediately west of Stainton, before rising steeply towards Kingsmoor House.
- 1.2.2 The underlying drift geology consists of Stanwix shales overlain by drift deposits of boulder clay and alluvium adjacent to the River Eden. The soils are attributed to the Wick Association, coarse well-drained brown earths, which extend westwards to Burgh-by-Sands and Kirkbampton.

### 1.3 CIRCUMSTANCES OF PROJECT



- 1.3.1 CCC propose to construct the CNDR around the western edge of Carlisle. The route extends for 8.5km around the western and northern sides of the city, from Greymoorhill North bridge (NY 3945 5990) on the north to Newby West (NY 3731 5365) in the south, and covers an area of approximately 30ha.
- 1.3.2 The proposed road runs in a west-south-westerly direction from Junction 44 of the M6 motorway, following the course of existing roads and passing close to Kingstown before turning south prior to crossing the main West Coast rail line. The line of the road, which from this point will comprise new build, continues south and then south-west, crossing the River Eden to the west of Stainton. On the south bank of the river the route intersects the line of Hadrian's Wall and an associated earthwork to the south, known as the Vallum, close to Knockupworth Cottage (NY 3710 5680), at the point where the Vallum is crossed by the now dismantled Carlisle and Silloth railway, which had itself been built on the line of the former Carlisle to Port Carlisle Canal (known as the Carlisle Navigation Canal). After crossing the C2042 Brough Road, the route then turns south near Cornhill, following a minor road for some of the distance to Bunkershill, where it turns south-east to join the existing A595.
- 1.3.3 Cumbria County Council propose to let the construction of the road as a PFI Design and Build-type contract. As there are significant archaeological remains along the proposed route, including the World Heritage Site of Hadrian's Wall, which is statutorily protected as a Scheduled Ancient Monument (SAM; Scheduled Ancient Monument no 26110), a brief has been prepared by Cumbria County Council's Historic Environment Service (CCCHES), acting in concert with English Heritage, setting out the archaeological requirements for the main contractor in advance and during construction works associated with building the road - the brief is contained within Annex 14 Part 2B of Schedule 4 of the Invitation to Negotiate (ITN) documentation associated with the scheme.

#### 1.4 ARCHAEOLOGICAL BACKGROUND

- 1.4.1 A full Environmental Statement in support of the development was published in 2000. This clarified the significance of the sites along the development route.
- 1.4.2 The archaeological and historical background to the development including a survey of previous archaeological work is recorded as part of the *Outline Archaeological Strategy* (OA North 2007) and scheme-wide research questions and objectives are outlined in Project Design 001.

#### 1.5 OXFORD ARCHAEOLOGY

- 1.5.1 Oxford Archaeology has over 30 years of experience in professional archaeology, and provides a professional and cost effective service. It is the largest employer of archaeologists in the country with more than 200 members

of staff and can deploy considerable resources with extensive experience to deal with any archaeological obligations arising from the development. Our offices in Lancaster and Oxford, trading as Oxford Archaeology North (OA North), and Oxford Archaeology (OA) respectively, enable us to provide a truly nationwide service. Watching briefs, evaluations and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. OA is an Institute of Field Archaeologists Registered Organisation (No 17), is bound by the IFA's Code of Conduct and applies the IFA's quality standards.

- 1.5.2 Between our two offices our company has unrivalled experience of working on prehistoric, medieval and post-medieval sites, and is recognised as one of the leading archaeological units in the country.

## 2 AIMS AND OBJECTIVES

- 2.1 The evaluation programme has been designed as an appropriate initial response to the development in order to record the extent of known archaeological features. It will also allow the assessment of the subsoil deposits within the development area to determine and, where necessary, record the presence, extent, nature, quality and significance of any archaeological deposits that may be threatened by the proposed development potentially leading to the production of a Further Archaeological Works Design (FAWD), following consultation with the County Archaeology Service.
- 2.1 This parcel lies within the former gardens of Kingsmoor House. Previous documentary research has revealed the area once contained formal gardens. Targeting some of the known features of these formal gardens might give an indication of survival of potentially older remains.
- 2.2 In this respect a more cautious machine strip is recommended than usual. If sealed contexts relating to the garden are encountered, an assessment for environmental potential would be required to determine, if possible, the survival of carbonized or waterlogged material, and the presence of charcoal, molluscs etc and pollen. This programme of work could inform the potential for further research into the garden.

### 3 METHOD STATEMENT

#### 3.1.1 GENERAL

3.1.1 The following work programme is based on information available at this time and is submitted in line with the aims and objectives summarised above.

3.1.2 Oxford Archaeology fully endorses the Institute of Field Archaeologists’:

- *Code of Conduct* (revised edition September 2002);
- *Standard and Guidance for Archaeological Field Evaluation* (1994);
- *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* (revised edition September 2000).

3.1.3 The management of the project will be in accordance with the methods and practice described in *Management of Archaeological Projects*, second edition (English Heritage, 1991).

#### 3.2 TRIAL TRENCHING (EVALUATION) METHODOLOGY

3.2.1 Parcel 47 (NY 338292 558419) is identified on Drawing No 42605/05/49/Am4 referred to in the brief. The area has not been previously investigated archaeologically, so its potential is unknown; there is, however, a likelihood that further archaeological remains will be found which will require additional mitigation. Evaluation by trial trenching of 5% of the land parcel is therefore the first stage in a programme of archaeological works that may be undertaken within Parcel 47. A series of three 30m x 1.6m trenches and one 20m x 1.6m trench will be excavated across the site, located to give representative sample of the archaeological potential of the area.

3.2.2 Initial topsoil removal will be undertaken by machine fitted with a toothless ditching bucket, working under archaeological supervision. Following the removal of the topsoil and any subsoil interface down to the top of the first significant archaeological deposits, the trenches will be hand-cleaned, including the sections, and features investigated by hand. Discrete negative features will be sampled at 100% by area and volume for small features (e.g. postholes) and 50% by area for larger discrete features (e.g. pits in excess of 1m diameter). Linear negative features will be sampled at 20%. Where multiple layers of horizontal stratigraphy are present no less than 10% of the area will be sondaged to the depth of natural deposits - additional machine excavation of homogenous layers may be appropriate. Any variations to the sample levels will be agreed with the County Archaeology Service. All other aspects of feature recording and treatment of artefacts and ecofactual data will be as per that defined for excavation.

3.2.3 **Reporting of discoveries:** any significant discoveries may require further

mitigation excavation works. A FAWD will be produced which will include a summary of features, plans at a suitable scale, and, where appropriate, interim comments on artefactual and ecofactual material. If, for whatever reason, the CCCHES archaeologist had not been able to visit the site and view the discoveries, then the FAWD may include a section on recommendations for FAW for CCCHES to comment on prior to making a decision regarding further works. Where evaluation does not reveal archaeological deposits and/or features that warrant further works, it is assumed that the area will be subsequently subject to the scheme-wide watching brief of the earthwork strip; in such cases, the negative results of the evaluation exercise will be incorporated within the scheme-wide post-excavation assessment produced following completion of all the on-site fieldwork.

- 3.2.4 All information identified in the course of the site works will be recorded stratigraphically, using a system, adapted from that used by Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections, colour slides and monochrome contacts) to identify and illustrate individual features. Primary records will be available for inspection at all times.
- 3.2.5 Results of all field investigations will be recorded on *pro-forma* context sheets. The site archive will include both a photographic record and accurate large scale plans and sections at an appropriate scale (1:50, 1:20 and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.
- 3.2.6 **Environmental Sampling:** environmental samples (bulk samples of 30 litres volume, to be sub-sampled at a later stage) will be collected from stratified undisturbed deposits and will particularly target negative features (gullies, pits and ditches). Any detailed assessment of the environmental potential of the site would be undertaken at a later date as part of the scheme-wide post-excavation assessment, but some samples from potentially significant deposits could be quickly assessed to aid production of a FAWD, if needed. Environmental samples will be stored in lidded plastic tubs in a cool, dark location.
- 3.2.7 The assessment could include soil pollen analysis and the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features. In addition, samples would be assessed for plant macrofossils, insect, molluscs and pollen from waterlogged deposits.
- 3.2.8 **Faunal remains:** if there is found to be the potential for discovery of bones of fish and small mammals, a sieving programme will be recommended as part of any subsequent Further Archaeological Works (FAW) on the site.
- 3.2.9 **Human Remains:** any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. The client, CCCHES and the



local Coroner will be informed immediately. If removal is essential the exhumation of any funerary remains will require the provision of a burial license from the Department of Constitutional Affairs, under section 25 of the Burial Act of 1857. An application will be made by OA North for the study area on discovery of any such remains and the removal will be carried out with due care and sensitivity under the environmental health regulations.

- 3.2.10 **Treatment of finds:** all finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines. All finds will be delivered and logged-in to the office at the end of each working day, where any valuable small finds will be transferred to secure storage. On site, any such finds will be carefully wrapped and kept in a secure, locked location away from public view.
- 3.2.11 All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator. All retained finds will be catalogued by context and material-type and stored in an appropriate manner, with the use of special containers, padding and acid-free tissue paper where necessary. Any detailed assessment of the artefactual potential of the site would be undertaken at a later date as part of the scheme-wide post-excavation assessment, but finds categories from potentially significant deposits could be quickly assessed to aid production of any FAWD, thereby enabling questions of date and sampling levels to be defined.
- 3.2.12 **Treasure:** any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.

### 3.3 HEALTH AND SAFETY

- 3.3.1 OA North provides a Health and Safety Statement for all projects and maintains a Safety Policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (3<sup>rd</sup> Edition, 1997). OA North will liaise with the Birse Civils, who will be the principal contractor under CDM regulations, to ensure all current and relevant health and safety regulations are met. Excavation of the trenches will not take place until a Permit to Work has been issued by Birse Civils.
- 3.3.2 A risk assessment will be completed in advance of any on-site works. OA North staff will be equipped with the appropriate PPE; Birse Civils have agreed to provide welfare facilities on-site.
- 3.3.3 OA North has professional indemnity to a value of £2,000,000, employer's



liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.

### 3.4 OTHER MATTERS

- 3.4.1 Access to the site will be arranged *via* Birse Civils.
- 3.4.2 Prior to work starting, Birse Civils will scan the locations of the proposed trenches for the location of any services, as part of the granting of a Permit to Work.

### 3.5 POST-EXCAVATION AND REPORT PRODUCTION

- 3.5.1 **Post-excavation:** as noted above in 3.2.3 if significant discoveries are made then a FAWD will be produced for comment by CCCHES. However, if the results of the evaluation are negative, then following completion of the fieldwork relating to the construction of the CNDR, a scheme-wide post-excavation assessment will be produced including the results of the evaluation. The site archive will be completed in accordance with English Heritage's guideline document *MAP 2*, Appendix 3. The assessment will be deposited with the County Historic Environment Record and English Heritage in due course.
- 3.5.2 **Archive:** the results from the evaluation will form part of the project archive, produced to professional standards, in accordance with current English Heritage guidelines (*MAP 2*), the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990) and *Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation* (Brown 2007). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The IFA's Code of Conduct makes it clear that the deposition of a properly ordered and indexed project archive in an appropriate repository is an essential and integral element of all archaeological projects.
- 3.5.3 Any finds recovered during the evaluation will be deposited with Tullie House Museum and Art Gallery, Carlisle.

## 4 STAFFING PROPOSALS

- 4.1 The project will be under the overall charge of **Fraser Brown BA** (OA North Senior Project Manager) to whom all correspondence should be addressed.
- 4.2 The evaluation will be directed by either an OA North Project Officer or an OA North Project Supervisor, assisted by an archaeological technician..
- 4.3 Assessment of any finds from the excavation will be undertaken by OA North's in-house finds specialist **Christine Howard-Davis BA** (OA North Finds Manager).

## 5 MONITORING

- 5.1 OA North will ensure that any significant results are brought to the attention of, Birse Civils, CCCHEs and English Heritage as soon as is practically possible. The aim will be, where possible and where necessary, to move quickly from the evaluation of any site to any Further Archaeological Works mitigation that is agreed following an on-site meeting between all relevant parties.

## REFERENCES

Brown, DH, Archaeological Archives Forum, 2007 *Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation*

[http://www.archaeologists.net/modules/icontent/inPages/docs/pubs/Archives\\_Best\\_Practice.pdf](http://www.archaeologists.net/modules/icontent/inPages/docs/pubs/Archives_Best_Practice.pdf)

[http://www.archaeologists.net/modules/icontent/inPages/docs/pubs/Archives\\_Best\\_Practice.pdf](http://www.archaeologists.net/modules/icontent/inPages/docs/pubs/Archives_Best_Practice.pdf) CFA

2005b *Carlisle Northern Development Route: archaeological evaluation; Phase 3*, unpubl rep

Department for Culture, Media and Sport (DCMS), 2002 *Treasure Act 1996, Code of Practice, Revised*

[http://www.culture.gov.uk/NRrdonlyres/C1027393-6D96-4B2A-86EF-DC1021117190/0/Treasure\\_Act\\_P0164.pdf](http://www.culture.gov.uk/NRrdonlyres/C1027393-6D96-4B2A-86EF-DC1021117190/0/Treasure_Act_P0164.pdf)

English Heritage, 1991 *Management of Archaeological Projects*, Second Edition

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

(<http://194.164.61.131/Filestore/archaeology/pdf/enviroarcg.pdf>)

Institute of Field Archaeologists (IFA) 2000 *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*

Institute of Field Archaeologists (IFA) 2001 *Standard and Guidance for Archaeological Excavation*

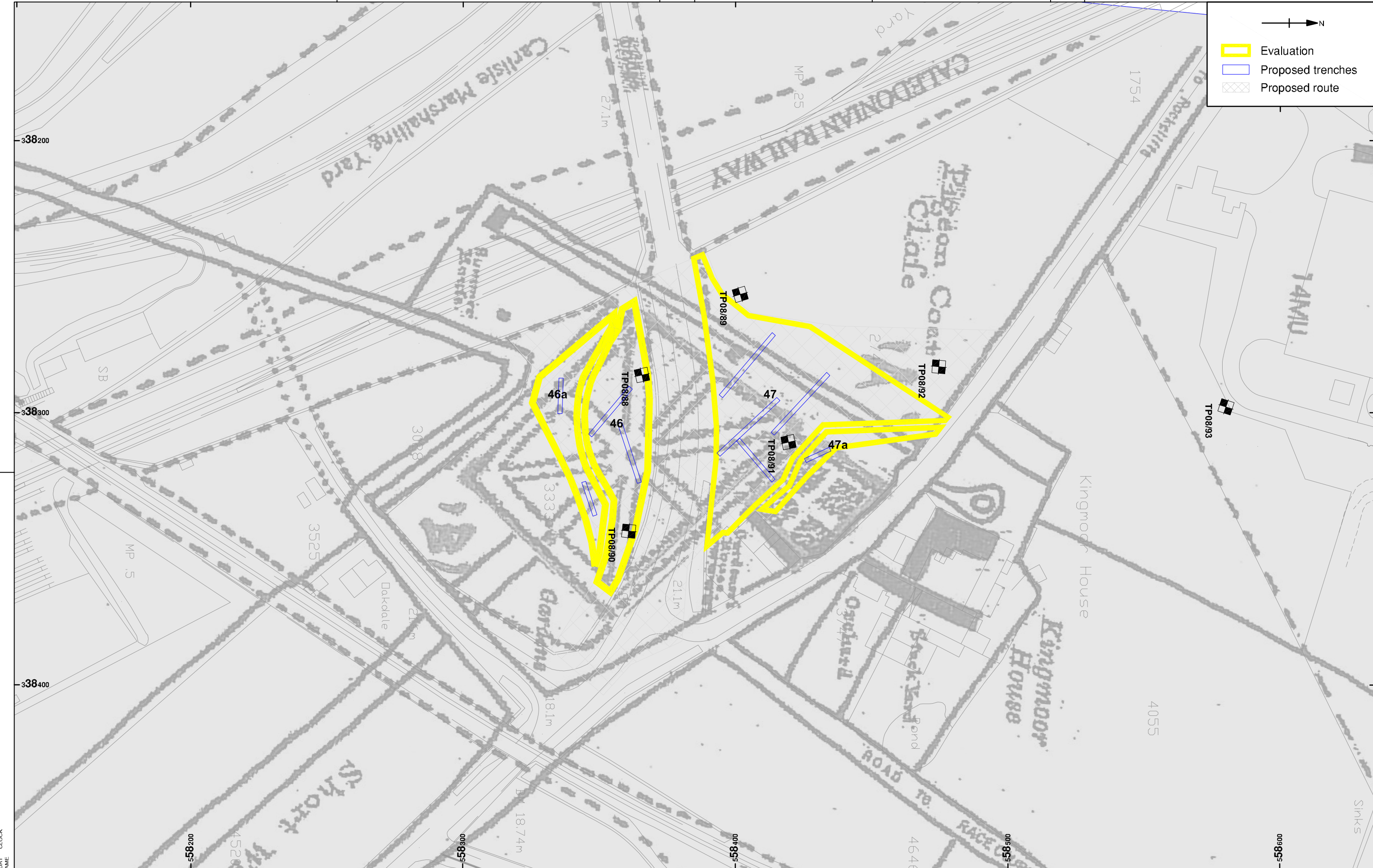
Institute of Field Archaeologists (IFA) 2002 *Code of Conduct*





SCAUM (Standing Conference of Archaeological Unit Managers), 1997 *Health and Safety Manual*, Poole

UKIC, 1990 *Guidelines for the Preparation of Archives for Long-Term Storage*, London



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