



making sense of heritage

Derwent Valley Aqueduct Triplication, Leicestershire

Archaeological Watching Brief Statement of Results

Site name	Derwent Valley Aqueduct Triplication		
Site address	Swithland Road, Swithland and Roecliffe Road, north of Cropston Reservoir, Leicestershire LE7 7HQ		
Client	Laing O'Rourke Infrastructure Services		
Curator	Leicestershire County Council		
Author	C. Hay	Project Manager	R. O'Neill
Site code	85121	Grid ref (centred)	NGR 453902, 313013 to 454002, 311490
Dates(s) of attendance	30/04/13 – 29/07/13		
Description of works	Monitoring topsoil stripping and pipeline trenching along the route of the Derwent Valley Aqueduct (Figure 1; Plates 1 and 2).		
Summary of site stratigraphy			
The stratigraphy was generally uniform across the site: 0.35m of topsoil overlay subsoil typically 0.5m in depth, which in turn overlay clean sandy clay natural with occasional lenses of grey clay. In places bedrock was reached below the clay. With the exception of post-medieval field boundaries, no archaeological deposits or features were observed during the monitoring.			
Archaeological features	None		
Finds observed	None		
Records	Day register, digital photos, photo register, annotated map, notes, trench record sheets and Written Scheme of Investigation.		
Associated reports	Wessex Archaeology 2012 Derwent Valley Aqueduct Triplication Route, Written Scheme of Investigation, WA 85121.01.		
Current archive location	Wessex Archaeology, Sheffield		
Long term archive location			
Interpretation			
No archaeological features or deposits were observed.			
Form completed by	CH	Date	16/09/13
Checked by	RO'N	Date	16/09/13



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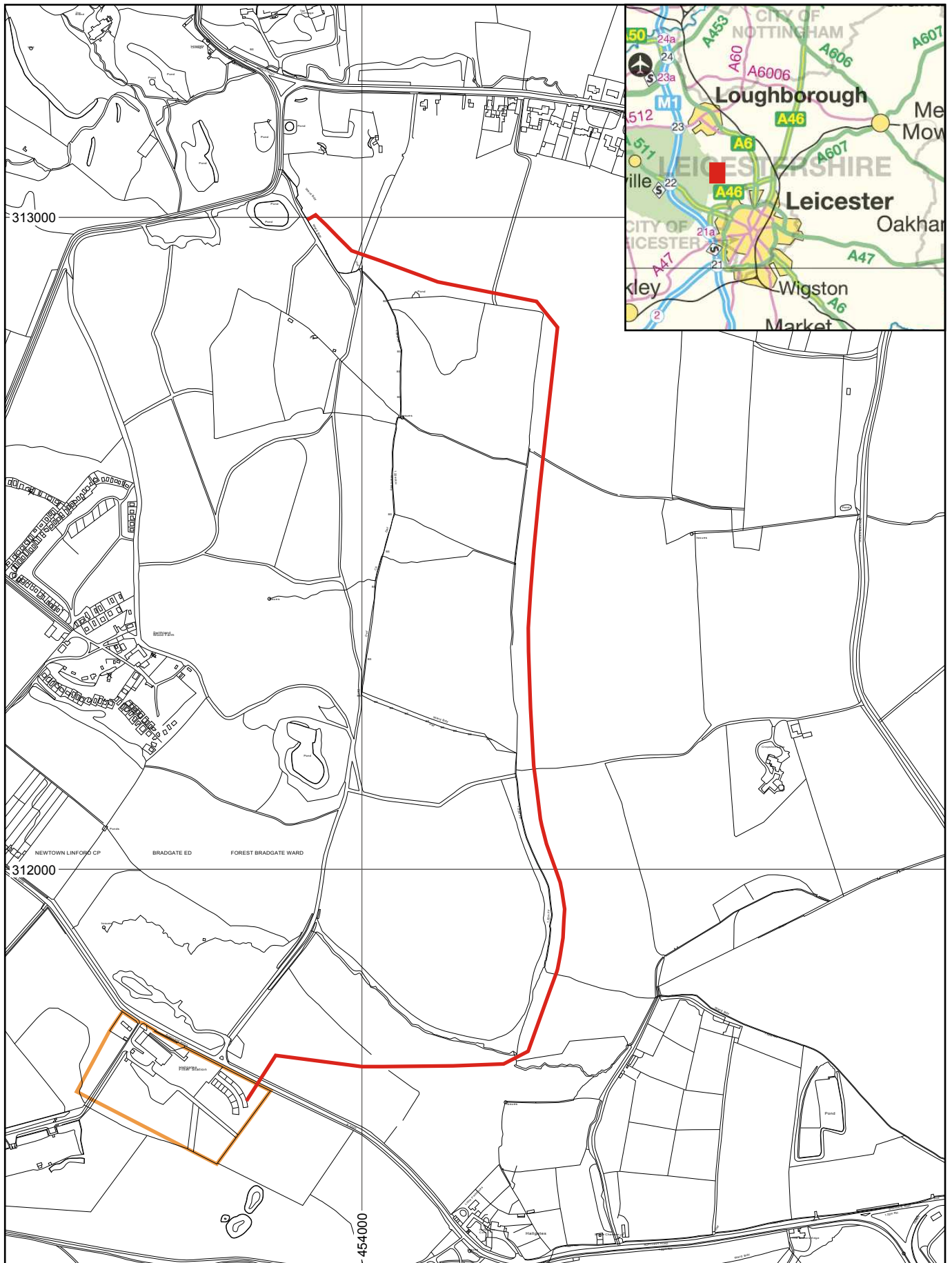
Plates



Plate 1: Shallow topsoil strip and bund.



Plate 2: Typical stepped pipe trench section.



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	Date:	August 2012	Revision Number:	1.0
	Scale:	Main graphic 1:25,000 @ A4	Illustrator:	CB
		Path: Y:\Projects\85120 (DVA Triplication)\Drawing Office\Report Figs\WSI		

Site location

Figure 1



**DERWENT VALLEY AQUEDUCT TRIPLICATION ROUTE,
LEICESTERSHIRE**

**Written Scheme of Investigation for
Archaeological Watching Brief**

Prepared for:
Laing O' Rourke Infrastructure
East Service Road,
Raynesway,
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by
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Report reference: 85121

August 2012

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**DERWENT VALLEY AQUEDUCT TRIPLICATION ROUTE,
LEICESTERSHIRE**

**Written Scheme of Investigation for
Archaeological Watching Brief**

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Figure 1: Site Location

**DERWENT VALLEY AQUEDUCT TRIPLICATION ROUTE,
LEICESTERSHIRE****Written Scheme of Investigation for
Archaeological Watching Brief****1 INTRODUCTION****1.1 Project Background**

1.1.1 Wessex Archaeology has been commissioned by Laing O Rourke (hereafter 'the Client') to undertake an archaeological watching brief to mitigate the potential loss of archaeological remains during the construct of an aqueduct and associated compound area, between Swithland Road, Swithland and Roecliffe Road, north of Cropston Reservoir, Leicestershire (hereafter 'the Scheme'; from NGR 453902, 313013 to 454002, 311490) (**Figure 1**).

1.1.2 This Written Scheme of Investigation (WSI) sets out the manner in which Wessex Archaeology will carry out the archaeological watching brief. This WSI has been prepared in accordance with current industry best practice and will be submitted to the Client and Leicestershire County Council (LCC) for information in line with current government planning policy (DCLG 2012).

1.2 Scheme location and description

1.2.1 The Scheme is located 0.7 km southwest of Swithland village and 10 km northwest of Leicester. The works will be undertaken within arable and pasture fields, to the south of Main Street Swithland and involves the stripping of topsoil and excavation of a pipe trench along the length of the Scheme.

1.2.2 The northern end of the Scheme is located at approximately 85m above Ordnance Datum (aOD); the landscape is relatively level as far as Swithland Wood where it then begins to rise to a height of 115m aOD at Roecliffe Road.

1.2.3 The solid geology of the Scheme is mudstone of the Gunthorpe Member - Mudstone group with superficial deposits of sand, gravel, clay and silt (BGS Sheet 155 – Coalville, 156- Leicester).

2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND**2.1 Introduction**

2.1.1 The area surrounding the Scheme is rich in archaeological remains including finds from prehistory and the medieval and post-medieval periods. The following information has been collated from a desk based assessment undertaken by Wessex Archaeology (Wessex Archaeology 2012).

2.2 Background

- 2.2.1 The earliest archaeological evidence from the Study Area consists of two finds dating to the Iron Age. A beehive quern was found south of Roecliffe Road, 400m south of the Scheme, while another was found just north of Roecliffe Road. These were not found in association with any archaeological features or sites.
- 2.2.2 No artefactual evidence dating to the Romano-British period has been found within the Study Area; however, it is known that slate was quarried here during this period. Some buildings in Roman Leicester were roofed with Swithland slate, this slate has also been found among Roman remains at Norton Disney in Lincolnshire (Pugh 1955, 43).
- 2.2.3 Swithland is not mentioned in the Domesday Book, however, the surrounding landscape was occupied at this time. The historic core of Swithland village is thought to date to the medieval period, being originally held by Groby.
- 2.2.4 The quarrying of slate is thought to have ceased after the Roman period, it was not until the 13th century that further evidence of this industry is found. By the 14th century Swithland slate was used to roof Leicester castle. A slate quarry in Swithland wood dates to this period, with further slate quarries recorded at The Brand. The last slate quarry in the area closed in 1887.
- 2.2.5 At the southern end of the Scheme is Bradgate Park, part of which dates to the later medieval period. The medieval deer park was enclosed by 1241 and was part of the Leicestershire estates of the Grey family and the Earls of Stamford. Swithland wood, directly to the west of the Scheme, is a complex of ten woodland compartments of various ages which is located within the parishes of Newton Linford and Swithland (Gardner 1998, 1). Fieldwork undertaken by Gardner revealed ridge and furrow earthworks beneath the woodland, indicating that this woodland was formerly used for cultivation. Gardner proposes that following the withdrawal from marginal and poor land in the 15th and 16th centuries due to poor weather and continual, localised outbreaks of the plague, the area currently occupied by Swithland wood may have been abandoned, leaving plant and tree species to colonise it uninterrupted (*ibid.* 22).
- 2.2.6 During the post-medieval period Bradgate Park expanded and developed significantly, its later extent is a Grade II Registered Park and Garden. It is thought that the Park was used for shooting, a pastime which became increasingly popular from the 1700s onwards. Within the Park are the ruins of Bradgate House, a brick mansion begun in the 1490s and abandoned in the 18th century.
- 2.2.7 Post-medieval assets within the Study Area consist of Listed Buildings within and surrounding Swithland, including a number of cottages on Main Street. Two boundary stones date to the late 18th century and mark the boundaries of the tiny former parish of Longdale, these are considered significant in their association with Longdale cottage.

- 2.2.8 Cropston Reservoir, southeast of the Scheme, was built in the late 1860s by the Leicester Water Works Company. The reservoir was created to the east of Bradgate Park, resulting in the flooding of the old park keepers house.
- 2.2.9 There has been some boundary loss within the Study Area since the 1st edition Ordnance Survey map of 1887-88. Directly south of Swithland, strip fields lead from the settlement, these survived throughout the first half of the 20th century however, they had been largely amalgamated into large fields by the 1970s. The boundaries of Swithland wood remain unchanged from the late 19th century and it can be seen from the OS maps that the Scheme impacts upon the Newton Linford/Swithland parish boundary at a number of locations. A number of field boundaries at the southern end of the Scheme identified on the Newton Linford map of 1799 are still present, as are others at the northern end, identified on a map dating to 1816.

3 AIMS AND METHODOLOGY

3.1 Aims

- 3.1.1 The principal aim of the watching brief is to allow for the collection and assessment/analysis of archaeological data impacted upon during groundworks associated with the Scheme.
- 3.1.2 The general aims of the project are:
- to identify any archaeological remains along the Scheme;
 - to accurately record the location and stratigraphy of areas excavated during groundworks;
 - to record all archaeological remains disturbed by the groundworks;
 - to determine the extent, condition, character, importance and date of any archaeological deposits encountered;
 - to provide information that will enable the archaeological remains to be placed with their local, regional and national contexts;
 - to recover artefacts disturbed by the site works; and
 - to produce an accurate and comprehensive record and report of any archaeological deposits disturbed by the site works.

3.2 Monitoring of Excavations/Groundworks

- 3.2.1 It is proposed here that the programme for the archaeological watching brief will be carried out, subject to prior and adequate notification being given by the Client, on the commencement of groundworks that may have an impact on archaeological features and deposits. Archaeological monitoring will be undertaken during the stripping of topsoil and, if necessary, the excavation of the pipe trench.
- 3.2.2 All works will be undertaken by a suitably qualified archaeologist from Wessex Archaeology. All excavations will be carried out by a tracked machine fixed with a toothless bucket. Any archaeological remains that may be revealed during the watching brief will be observed and recorded in accordance with current industry best practice (IfA 2008).

- 3.2.3 The Client will afford reasonable access in order that all archaeological features and deposits revealed during excavations and groundworks can be investigated and recorded.
- 3.2.4 All archaeological deposits will be recorded using Wessex Archaeology's pro forma recording system. Each context record will fully describe the location, extent, composition and relationship of the subject and will be cross-referenced to all other assigned records. Context numbers used in the excavation will not be repeated. Each excavated context will appear on at least one detailed plan at 1:50 or 1:20 scale and one section at 1:10 and co-ordinated on to the overall site plan. A digital photographic record will be maintained to illustrate both the detail and the general context of the principal features. Photography using colour transparencies and black and white negatives (on 35mm film) will be used as appropriate.

4 FINDS AND ENVIRONMENTAL SAMPLING

4.1 Finds and environmental samples

- 4.1.1 Finds will be treated in accordance with the relevant guidance given in the Institute for Archaeologist's Standard and Guidance for Archaeological Watching Brief (revised 2008), the UK Institute of Conservators Guidelines "Conservation Guideline No 2" (1990), the Museums and Galleries Commissions "Standards in the Museum Care of Archaeological Collections (1992)", English Heritage (2005), and the requirements of the repository Museum excepting where they are superseded by statements made below.
- 4.1.2 All artefacts from excavated contexts will be retained (except unstratified modern material) and taken to Wessex Archaeology offices in Sheffield for further work.
- 4.1.3 All retained artefacts will, as a minimum, be washed, weighed, counted and identified. Any artefacts requiring conservation or specific storage conditions will be dealt with immediately in line with *First Aid for Finds* (Watkinson & Neal 1998). Ironwork from stratified contexts will be X-rayed and stored in a stable environment along with other fragile and delicate material. The X-raying of objects and other conservation needs will be undertaken by the staff of an appropriately approved conservation centre.
- 4.1.4 Information will be obtained from LCC concerning conditions and arrangements for the deposition of finds. Arrangements for archive deposition will be made with Leicestershire Heritage Services.
- 4.1.5 In the event of the discovery of any human remains, it is proposed that they will be left and recorded in situ, then covered, protected and reburied. The Client and LCC will be informed. Where the redevelopment works will unavoidably disturb such remains, these will be fully recorded, excavated and removed from the site, subject to compliance with the relevant Ministry of Justice Licence, which will be obtained by Wessex Archaeology.
- 4.1.6 Should human remains be excavated, all excavation and post-excavation will be in accordance with the standards set out in IfA Technical Paper 13:

'Excavation and Post-excavation Treatment of Cremated and Inhumed Remains.' Appropriate specialist guidance/site visits will be undertaken by Jackie McKinley of Wessex Archaeology. Following analysis, the final placing of human remains will be subject to the requirements of the Ministry of Justice licence. Contingency sums for specialist site visits will be agreed as required.

4.2 Environmental Samples

4.2.1 Bulk environmental soil samples for plant macro-fossils, small animal and fish bones and other small artefacts will be taken from appropriate well-sealed and archaeological deposits. The residues and sieved fractions of the bulk environmental soil samples will be recorded and retained with the project archive. For charred material, bulk samples of 10 litres will be taken for processing by flotation, using Wessex Archaeology's flotation system and processing methods. All samples will be floated through a 500µm mesh.

4.3 Other Samples

4.3.1 Other samples will be taken, as appropriate, in consultation with Wessex Archaeology specialists and the English Heritage Regional Science Advisor (e.g. dendrochronology, soil micromorphology, monolith samples, C14, etc). Samples will be taken for scientific dating where necessary.

4.4 Treasure

4.4.1 In the event of discovery of artefacts covered or potentially covered by The Treasure Act 1996 (and amendments), their excavation and removal will be undertaken following notification of the Client, Coroner and LCC.

5 POST-EXCAVATION AND REPORTING

5.1 Report

5.1.1 On completion of all archaeological monitoring, a report detailing the results of work will be produced and forwarded to the Client and LCC within three months of completion of all fieldwork.

5.1.2 Following approval of the report the required number of hard copies will be issued to the Client and LCC.

5.1.3 The watching brief report will be prepared in accordance with the Institute for Archaeologists' (2008) *Standard and Guidance for an Archaeological Watching Brief*, except where superseded by statements below.

5.1.4 The report will comply with IfA standards (2008) and in any case may include;

- a non-technical summary;
- plans and sections at an appropriate scale locating the Site, location of works, known archaeological structures and deposits and their extent;
- tabulation of finds data by context and by material type;
- a summary by category of the material types recovered;

- a summary of the palaeo-environmental evidence recovered;
- preliminary phasing of any archaeological structures, features and deposits encountered;
- a consideration of the archaeological evidence from within the Site set in its broader landscape and historic setting.

5.1.5 The preparation of the report may involve the following elements:

- the conservation of appropriate material, including the X-raying of ironwork;
- the spot-dating of all pottery from excavated contexts. Spot-dating will be corroborated by scanning of other categories of material;
- a statement on each category of material, including reference to quantity, provenance, range and variety and condition;
- the selection and prioritisation of bulk soil samples taken for environmental and artefactual data in the light of preliminary phasing. Sieving, processing and scanning of selected soil samples will be undertaken and an assessment statement on charred food and plant remains;
- a statement of potential for each material category and for the data collection as a whole will be prepared, including specific questions that can be answered and the potential value of the data to local, regional and national investigation priorities;

6 ARCHIVE

6.1 Preparation and Deposition

6.1.1 The complete project archive will be prepared in accordance with Wessex Archaeology's Guidelines for Archive Preparation and in accordance with standard guidelines for the preparation of excavation archives (UKIC 1990; Brown 2007). The Archive will be deposited with the local repository museum. As part of the post excavation work an OASIS form will be filled out and submitted to the Archaeological Data Service (ADS).

7 PROJECT MANAGEMENT AND STAFFING

7.1 Personnel

7.1.1 The fieldwork will be directed and supervised by an experienced archaeologist from Wessex Archaeology's core staff, who will be on Site at all times for the length of monitoring. The overall responsibility for the conduct and management of the project will be held by one of Wessex Archaeology's project managers, who will visit the fieldwork as appropriate to monitor progress and to ensure that the scope of works is adhered to. The appointed project manager and experienced archaeologist will be involved in all phases of the project through to its completion. The following staff may be utilised on the project:

Andrea Burgess	Project Manager
Sam Fairhead BSc	Project Archaeologist

8 STANDARDS

8.1 Quality and Code of Practice

- 8.1.1 Wessex Archaeology is a registered archaeological organisation with the Institute for Archaeologists.
- 8.1.2 Wessex Archaeology endorses the Code of Practice and the Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology of the Institute for Archaeologists.
- 8.1.3 All core staff would be of a standard approved by Wessex Archaeology, be employed in line with The Institute for Archaeologists Codes of Practice and be members of the Institute for Archaeologists or be appropriately qualified
- 8.1.4 Wessex Archaeology operates a *Project Management System*. All projects are undertaken under the direction of the Project Manager who is responsible to a Regional Manager, who ensures the maintenance of quality standards within the organisation. The Chief Executive has ultimate responsibility for all of the Trust's work.
- 8.1.5 All work will be carried out in line with current industry best practice (IfA 2008).

9 INSURANCE AND HEALTH AND SAFETY

9.1 Policy and Risk Assessment

- 9.1.1 Health and safety considerations will be of paramount importance in conducting all fieldwork. Safe working practises will override archaeological considerations at all times.
- 9.1.2 All work will be carried out in accordance with the Health and Safety at Work etc. Act 1974 and the Management of Health and Safety Regulations 1992, and all other relevant Health and Safety legislation, regulations and codes of practice in force at the time.
- 9.1.3 Wessex Archaeology will supply a Risk Assessment to the Main Contractor before the commencement of any fieldwork. The Risk Assessment will have been read and understood by all staff attending the Site before any groundwork commences, and a copy will be kept on Site at all times. A copy of Wessex Archaeology Health and Safety Policy is available on request.
- 9.1.4 All Wessex Archaeology staff will comply with any requests by the Main Contractor concerning health and safety, including requirements to attend site induction prior to the commencement of fieldwork.

- 9.1.5 Wessex Archaeology has both public liability (£10,000,000) and professional indemnity insurance (£5,000,000).
- 9.1.6 Wessex Archaeology will ensure that all work is carried out to within the Health and Safety at Work etc. Act 1974 and the Management of Health and Safety Regulations 1992, and in accordance with the SCAUM (Standing Conference of Archaeological Unit Managers) health and safety manual *Health and Safety in Field Archaeology* (1997).

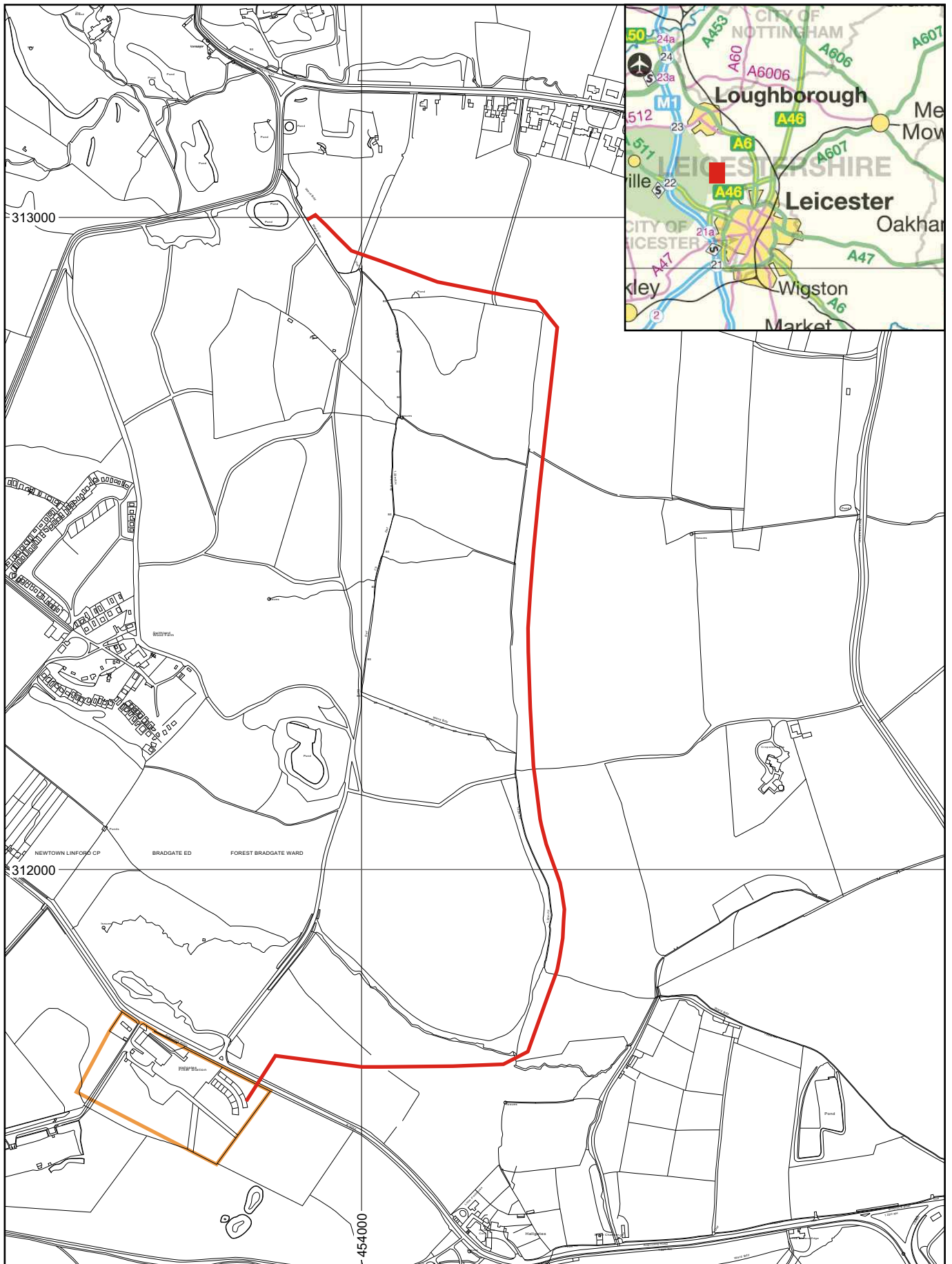
10 REFERENCES

10.1 Bibliography

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- Watkinson, D. and Neal, V. (eds). 1998. *First Aid for Finds: practical guide for archaeologists.* United Kingdom Institute for Conservation of Historic & Artistic Works, Archaeology Section; 3rd Revised Edition.
- Wessex Archaeology 2012, *Derwent Valley Aqueduct Triplication Route, Leicestershire, Desk Based Assessment, Report No. 85120.01*

10.2 Cartographic

British Geological Survey (BGS) 1972: Sheet 155 – Coalville, 156 –
Leicester



— Scheme route
— Existing water works

Wessex Archaeology

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Scale:	Main graphic 1:25,000 @ A4	Illustrator:	CB
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Site location

Figure 1