



**PRINCE OF WALES WETLAND**  
**Ordnance Road**  
**London EN3**

London Borough of Enfield

Pre-determination evaluation report

February 2017



**Prince of Wales Wetland  
Ordnance Road  
London EN3**

**Pre-determination Evaluation Report**

NGR 536915 198236

**Site code PWL17**

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# Contents

<u>Executive summary</u>	<u>2</u>
<u>1 Introduction</u>	<u>3</u>
1.1 Site background	3
1.2 Designated heritage assets	3
1.3 Aims and objectives	3
<u>2 Archaeological and historical background</u>	<u>4</u>
2.1 Topography and geology	4
2.2 Predicted archaeological potential	4
<u>3 The evaluation</u>	<u>6</u>
3.1 Methodology	6
3.2 Results	6
3.3 Assessment of the evaluation and significance of the results	8
<u>4 Proposed development impact and recommendations</u>	<u>9</u>
<u>5 Planning framework</u>	<u>10</u>
<u>6 Bibliography</u>	<u>11</u>
<u>7 NMR OASIS archaeological report form</u>	<u>12</u>

## Figures

Cover: *Photograph of excavation of Trench 4, looking west*

*Fig 1 Site location*

*Fig 2 Areas of evaluation*

*Fig 3 Photograph of the south-facing section at 10m from the west end of Trench 3, looking north, with 0.5m scale*

*Fig 4 Photograph of Trench 7 showing wood and branch fragments in deposit [61], looking NW, with 1.0m scale*

# Executive summary

*This report presents the results of a 'pre-determination' archaeological trial trench evaluation carried out by Museum of London Archaeology (MOLA) and the Enfield Archaeological Society (EAS) between 06/02/17 and 12/02/17 on the site of Prince of Wales Field, Enfield, London EN3. The evaluation was requested by the local planning authority in order to supply sufficient information for an appropriate strategy to be formulated to mitigate the impacts of the proposed development on buried heritage assets. The evaluation was commissioned by London Borough of Enfield. The site is within the Lea Valley West archaeological priority area, as defined by the London Borough of Enfield.*

*The scheme comprises localised excavation and landscaping to create a series of wetland and bio-retention basins to treat the runoff from the surface water sewer and to create flood storage. The proposed works would also involve diverting a Thames Water surface water sewer from the north of the site, which currently outfalls directly into the Turkey Brook, into a constructed wetland, and levelling of the existing banks and reuse of the excavated material to create raised meadows to the north and south of the new wetlands. Removal of some vegetation, and relocation and planting of trees close to the playground area in the north-east of the site are also proposed.*

*The evaluation comprised the excavation of seven trial trenches (TR 1–7). TR 1–5 were located to test levels of natural deposits and archaeological survival in the areas of the proposed basins and new sewer course; TR 6–7 were in areas of proposed spoil mounding to assess the likely impact of heavy vehicle movement during landscaping.*

*The results of the field evaluation have helped to refine the initial assessment of the archaeological potential of the site, and have provided palaeoenvironmental evidence. A consistent sequence of deposits was found across the majority of the site: natural coarse quartz and flint gravel overlain by alluvial sands, sealed by slightly silty or sandy clays, which graded into brown silty clay subsoil/topsoil. Trench 7 was unique in that it revealed a layer of humic silty clay, containing preserved tree branches, which overlay a layer of slightly silty peat with wood fragments. However, the wood fragments appear to have been natural in origin and deposition. Evidence of human activity came in the form of 19th to 20th century material found within the subsoil/topsoil, and two unstratified struck flints recovered from Trench 7.*

*From the evaluation results, it is likely that the proposals would have no archaeological impact, and therefore that no mitigation would be required.*

# 1 Introduction

## 1.1 Site background

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- 1.1.1 The evaluation took place at Prince of Wales Field, Enfield EN3, hereafter called 'the site'. The Ordnance Survey (OS) National Grid Reference for the centre of the site is 536915 198236. The site code is PWL17.
- 1.1.2 An Historic Environment Assessment (HEA) has been prepared by MOLA in February 2017 and provides detail on the natural geology, archaeological and historical background of the site, and an initial interpretation of its archaeological potential (MOLA, 2017a). At the request of the local planning authority (LPA), as advised by the Greater London Archaeological Advisory Service (GLAAS, ref. CLO22156), this 'pre-determination' archaeological evaluation has been carried out to provide further information on the archaeological potential of the site and the likely impacts of the proposals. The evaluation was conducted in accordance with a written scheme of investigation (WSI) prepared by MOLA (MOLA, 2017b) and approved by Sandy Kidd, GLAAS Archaeology Advisor.
- 1.1.3 The report will be submitted as part of the planning application, to enable (LPA) to formulate an appropriate mitigation strategy, if required, for the proposed development.

## 1.2 Designated heritage assets

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- 1.2.1 The site does not contain any nationally designated (protected) heritage assets, such as scheduled monuments, listed buildings or registered parks and gardens. The nearest listed building is a Grade II listed small arms factory from the 19th century, 330m north-east of the site.
- 1.2.2 The site lies within an area of archaeological interest or an archaeological priority area (APA), the Lea Valley West APA as defined by the London Borough of Enfield mainly for its potential for prehistoric occupation evidence and related palaeoenvironmental remains along the Lea Valley.

## 1.3 Aims and objectives

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- 1.3.1 The purpose of archaeological evaluation as defined by the Chartered Institute for Archaeologists is to confirm 'as far as is reasonably possible, the nature of the archaeological resource within a specified area using appropriate methods and practices' (CIfA 2014). The aim of such an investigation 'pre-determination', i.e. prior to the determination of planning consent is to clarify the site's potential for archaeological remains and so inform the LPA's consideration of the implications of the planning application. The results will also help the LPA to set out an appropriate strategy for any further investigation and/or mitigation which may form a condition as part of planning consent.
- 1.3.2 Objectives for this trial trench evaluation were to clarify:
- the extent of modern disturbance;
  - the depth of the natural deposits;
  - the presence/absence of archaeological remains within the site, their nature and significance, which could comprise:
    - palaeoenvironmental remains within alluvial deposits,
    - evidence of prehistoric wetland exploitation, and possible flint-working.

## 2 Archaeological and historical background

### 2.1 Topography and geology

2.1.1 A description of the topology and underlying geology is detailed in the HEA.

2.1.2 In summary, and based on the results of a limited geotechnical survey in the site (Nicholls Colton Geotechnical, 2015), known / predicted levels are as follows:

- Current ground level generally is at 15.3-15.5m above Ordnance Datum (OD) in the southern and central parts of the site (with localised indentations at 15.2m OD), but slopes down to 14.0m OD along the south-western edge of the site, and rises to 19.3m OD along the northern part of the site and to 18.3m OD along the north-western part of the site.
- The top of untruncated alluvium generally is at 14.6-15.3m OD (0.2-0.7m below ground level/mbgl) in the southern and central parts of the site (at 14.5-15.0m OD within localised indentations), 13.3-13.8m OD along the south-western edge of the site, at 18.6-19.1m OD along the northern part of the site and at 17.6-18.1m OD along the north-western part of the site.
- The top of untruncated Gravel is at 13.5-14.7m OD (0.8-1.8mbgl) in the southern and central parts of the site (at 13.4-14.4m OD within localised indentations), 12.2-13.2m OD along the south-western edge of the site, at 17.5-18.5m OD along the northern part of the site and at 16.5-17.5m OD along the north-western part of the site.

The site is currently an open area of rough grass, fringed with trees and scrub and crossed by public paths.

### 2.2 Predicted archaeological potential

#### *Palaeoenvironmental remains*

2.2.1 The site has high potential to contain palaeoenvironmental remains as it lies in an area of former marsh and alluvium associated the River Lea. Alluvial deposits, such as peats and organic clays, if present, are likely to contain microfossils (e.g. pollen) and floral and faunal macrofossils such as molluscs and occasionally ostracods, seeds, plant fragments and pollen which can be utilised to reconstruct past local environments. Minerogenic deposits such as alluvial silts and clays have the potential for preservation of diatoms that can provide information on the salinity status of the depositional environments that would enhance interpretation of the sedimentary sequence. Wood and organic sediment can be dated by radiocarbon, important for establishing the chronology of the sequence.

#### *Prehistoric period (800,000 BC–AD43)*

2.2.2 There is considered to be a moderate potential for prehistoric remains as the site is located on the western side of the Lea floodplain, and although the site may have been too wet for settlement, the resources within the channel and floodplain marshland would have attracted activity. The broader landscape of this part of north London has evidence of early settlement on the dry Gravels further west and south-west of the site, with concentrations of Lower Palaeolithic and Neolithic human activity along the River Lea. Although limited prehistoric remains have been found in the vicinity of the site, there is nevertheless a background potential for evidence of marshland resource exploitation within or beneath the alluvium, possibly well-preserved due to waterlogging. Flint artefacts, possibly Mesolithic, are possible

#### *Roman period (AD 43–410)*

2.2.3 The site has a low potential to contain Roman remains: it was 3.8km north-east of a Roman road and settlement, and limited evidence of Roman activity has been found in the vicinity. It is possible that the site was in an area used for pasture in-between Roman settlements further

north and south-west.

*Medieval – Post-medieval period (AD 410–present)*

- 2.2.4 The site has a low potential to contain early medieval (Saxon), later medieval and post-medieval remains. The site lay some distance from the medieval settlements centred further west of the site and the Lea floodplain. No significant remains of these periods have been found within the study area. The location would have been prone to flooding and it is likely that it continued to be marshland or meadow during the later medieval period. Based on historic maps, the site was within fields or meadows and remained as an open space until the present day.

## 3 The evaluation

### 3.1 Methodology

- 3.1.1 All archaeological excavation, monitoring and recording during the evaluation was carried out in accordance with the preceding WSI (MOLA, 2017b). Although the WSI specified trenches 2.0m-wide, Trenches 1–5 were excavated 1.5m wide. This was for logistical reasons and was agreed on site with Laura O’Gorman, Assistant Archaeology Advisor, GLAAS, *per comms*.
- 3.1.2 The evaluation involved the excavation and recording of seven trenches. Trenches 1–5 were recorded by MOLA; Trenches 6 and 7 were recorded by members of the Enfield Archaeological Society (EAS).
- 3.1.3 Trenches were excavated by machine by the sub-contractors (GEH Groundworks Ltd), monitored by a member of staff from MOLA.
- 3.1.4 Trench locations were surveyed on site by MOLA and subsequently tied to the OS grid by MOLA Geomatics.
- 3.1.5 The site has produced: 6 trench location plans; 16 context records; 7 section drawings at 1:20 and 1:50; and 15 photographs. Two unstratified flint flakes were recovered from Trench 7.
- 3.1.6 The site finds and records can be found under the site code PWL17 in the Museum of London Archaeological Archive.

### 3.2 Results

- 3.2.1 For trench locations see Fig 2.
- 3.2.2 The sequence of deposits was consistent across the majority of the site (see Fig 3). Natural coarse quartz and flint gravel (context [3]) was overlain in all but Trench 5 by alluvial sands (context [4]). These sands were laminated with alternating bands of sand and slightly clayey sand. Gravel and sand deposits were sealed by slightly silty or sandy clays [2] in all trenches, which exhibited a gleyed colour pattern characteristic of a historically wetland landscape. This pattern was generally light yellow or orange brown (0.5–0.75m thick) over mid to dark slightly green or bluish grey (150–250mm thick). An orange colouration (c 150mm thick) was observed separating this sequence in Trench 3, and probably represents localised build-up of iron oxides. Occasional rootlets were observed in the top 100-200mm of the clays. Clay graded into brown silty clay subsoil/topsoil [1], 200–400mm thick, which completed the sequence and formed the modern ground surface. The alluvial clays may represent overbank flooding at the edge of the Lea floodplain (MOLA 2011, 110; Craig Halsey, MOLA Project Manager, *pers comm*).
- 3.2.3 No finds were discovered in Trenches 1–6 in the deposits below the subsoil/topsoil. Some finds were recovered from within the subsoil/topsoil. This material was almost exclusively of modern date (for example: plastic, metal can fragments and golf balls) but this horizon also produced a single small fragment of clay tobacco pipe dated c 1780–1860. These items most probably represent casual losses or discarded rubbish, although some, including the clay pipe, could have been introduced to the site via re-deposited/dumped soil imported from elsewhere as part of modern landscaping. These finds were noted but not kept.
- 3.2.4 Trench 7 was unique in that it revealed a layer of humic silty clay [61], 360mm thick at 14.09m OD (1.04m bgl), containing tree branches (see Fig 4). This deposit overlay a layer of slightly silty peat [62], >200mm with wood fragments at 13.73m OD (1.4m bgl), probably associated with vegetation development at the floodplain margins. The wood within deposits [61] and [62] appears to have been natural in origin and deposition, since all of it was unworked and no stakes were found. Environmental samples were taken from deposits [61] and [62]. Two struck flints were recovered unstratified during the backfilling of Trench 7, comprising a battered flake with trace of cortex; and a small biconvex lump with multiple flake scars and a distal notch (or damage), both in dark brown flint.
- 3.2.5 No cut features of any period were observed in any of the trenches.
- 3.2.6 The top of untruncated natural gravel sloped down across the site from north to south and



also, to a lesser extent, from west to east; at 14.70m in the north (Trench 5), to 13.56m OD in the south (Trench 1), and less than 13.55m OD in the east (natural gravel not reached in Trench 7).

### *Evaluation Trench 1*

Location	South part of the site
Dimensions	1.50m by 15m by 1.70m depth
Modern ground level	15.30–15.32m OD
Base of subsoil/topsoil	15.00–15.10m OD
Depth of archaeological deposits seen	No archaeological features or deposits were encountered
Level of base of base of trench	13.56–13.65m OD
Natural observed	Natural gravel at 13.56m OD (NW end of trench) to 13.65m OD (SE end of trench)

### *Evaluation Trench 2*

Location	South-west part of the site
Dimensions	1.50m by 15m by 1.90m depth
Modern ground level	15.41–15.43m OD
Base of subsoil/topsoil	15.05m OD
Depth of archaeological deposits seen	No archaeological features or deposits were encountered
Level of base of trench	13.54–13.61m OD
Natural observed	Natural gravel at 13.54m OD (NW end of trench) to 13.61m OD (SE end of trench)

### *Evaluation Trench 3*

Location	Centre of the site
Dimensions	1.50m by 30m by 1.56m depth
Modern ground level	15.29–15.36m OD
Base of subsoil/topsoil	14.85–15.00m OD
Depth of archaeological deposits seen	No archaeological features or deposits were encountered
Level of base of trench	13.80–14.04m OD
Natural observed	Natural gravel at 13.86m OD (NW end of trench) to 14.04m OD (SE end of trench)

### *Evaluation Trench 4*

Location	North-west part of the site
Dimensions	1.50m by 10m by 1.45m depth
Modern ground level	15.45m OD
Base of subsoil/topsoil	15.24–15.30m OD
Depth of archaeological deposits seen	No archaeological features or deposits were encountered
Level of base of base of trench	14.00–14.40m OD
Natural observed	Natural gravel at 14.00m OD (east end of the trench) and 14.46m OD (west end of the trench)

### *Evaluation Trench 5*

Location	North part of the site
Dimensions	1.50m by 5m by 1.40m depth
Modern ground level	15.47–15.51m OD
Base of subsoil/topsoil	15.38–15.44m OD
Depth of archaeological deposits seen	No archaeological features or deposits were encountered
Level of base of trench	14.50m OD
Natural observed	Natural gravel at 14.70m OD

### *Evaluation Trench 6*

Location	North-west part of the site
Dimensions	2m by 2m by 1.62m depth
Modern ground level	16.04–16.11m OD
Base of subsoil/topsoil	15.30m OD
Depth of archaeological deposits seen	No archaeological features or deposits were encountered
Level of base of trench	14.58m OD
Natural observed	Natural gravel at 14.64mOD

### *Evaluation Trench 7*

Location	South-east part of the site
Dimensions	2m by 2m by 1.56m depth
Modern ground level	15.07–15.11m OD
Base of subsoil/topsoil	14.52–14.63m OD
Depth of archaeological deposits seen	Humic silty clay (context [61], 360mm thick) at 14.09m OD (1.04m bgl), containing tree branches. This deposit overlay a layer of slightly silty peat (context [62], >200mm) with wood fragments at 13.73m OD (1.4m bgl)
Level of base of deposits observed and/or base of trench	13.55m OD
Natural observed	Natural gravels not reached

## **3.3 Assessment of the evaluation and significance of the results**

- 3.3.1 The size and layout of the trenches are considered to have provided a representative sample. The results of the evaluation have helped to refine the initial assessment of the archaeological potential of the site, and clarify the impact of the proposals. A consistent sequence of natural deposits was found in trenches excavated across the areas which would be affected by the construction of the wetlands. Two unstratified worked flints, of low heritage significance, were the only evidence of early human activity.

## 4 Proposed development impact and recommendations

- 4.1.1 The scheme comprises localised excavation and landscaping to create a series of wetland and bio-retention basins to treat the runoff from the surface water sewer and to create flood storage. The proposed works would also involve diverting a Thames Water surface water sewer from the north of the site, which currently outfalls directly into the Turkey Brook, into a constructed wetland, and levelling of the existing banks and reuse of the excavated material to create raised meadows to the north and south of the new wetlands. Removal of some vegetation, and relocation and planting of trees close to the playground area in the north-east of the site are also proposed.
- 4.1.2 A consistent sequence of natural deposits was found in trenches excavated across the areas which would be affected by the construction of the wetlands, with two unstratified worked flints providing the only evidence of early human activity.
- 4.1.3 From the evaluation results, it is likely that the proposals would have no archaeological impact, and therefore that no mitigation would be required.

## 5 Planning framework

- 5.1.1 Current planning legislation and policies are detailed in the Historic Environment Assessment (MOLA, 2017a) accompanying the planning application.

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# 7 NMR OASIS archaeological report form

OASIS ID: molas1-277157

## Project details

Project name	Prince of Wales Wetland
Short description of the project	An archaeological trial trench evaluation, comprised the excavation of seven trial trenches, carried out by MOLA and the Enfield Archaeological Society (EAS) between 06/02/17 and 12/02/17 on the site of Prince of Wales Field, Enfield, London EN3. A consistent sequence of deposits was found across the majority of the site: natural gravel overlain by alluvial sands, sealed by clays, which graded into silty clay subsoil/topsoil. Trench 7, to the SE of the site, revealed a layer of humic silty clay, containing preserved tree branches, which overlay a layer of slightly silty peat with wood fragments. However, these timber fragments appear to have been natural in origin and deposition. Evidence of human activity came in the form of 19th to 20th century material found within the subsoil/topsoil, and two unstratified struck flints recovered from Trench 7.
Project dates	Start: 06-02-2017 End: 12-02-2017
Previous/future work	No / Not known
Any associated project reference codes	PWL17 - Sitecode
Type of project	Field evaluation
Site status (other)	Lea Valley West archaeological priority area
Current Land use	Woodland 6 - Parkland

## Project location

Country	England
Site location	GREATER LONDON ENFIELD ENFIELD PRINCE OF WALES WETLAND, Ordnance Road
Postcode	EN3
Study area	35000 Square metres
Site coordinates	TQ 36915 98236 51.665715893955 -0.020053536515 51 39 56 N 000 01 12 W Point
Height OD / Depth	Min: 13.56m Max: 14.7m

## Project creators

Name of Organisation	MOLA
Project brief originator	London Borough of Enfield
Project design originator	London Borough of Enfield
Project director/manager	Christina Holloway
Project supervisor	Martin Dearne (EAS)
Project supervisor	Rob Hartle
Project supervisor	Martin Banikov

## Project archives

Physical Archive recipient	LAARC
Physical Archive ID	PWL17
Physical Contents	"Worked stone/lithics"
Digital Archive recipient	LAARC
Digital Archive ID	PWL17
Digital Media available	"Images raster / digital photography", "Survey"
Paper Archive recipient	LAARC
Paper Archive ID	PWL17
Paper Media available	"Context sheet", "Matrices", "Plan", "Report", "Section", "Survey "

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## Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Pre-determination Evaluation Report
Author(s)/Editor(s)	Hartle, R
Date	2017
Issuer or publisher	MOLA
Place of issue or publication	London
Description	unpublished fieldwork report

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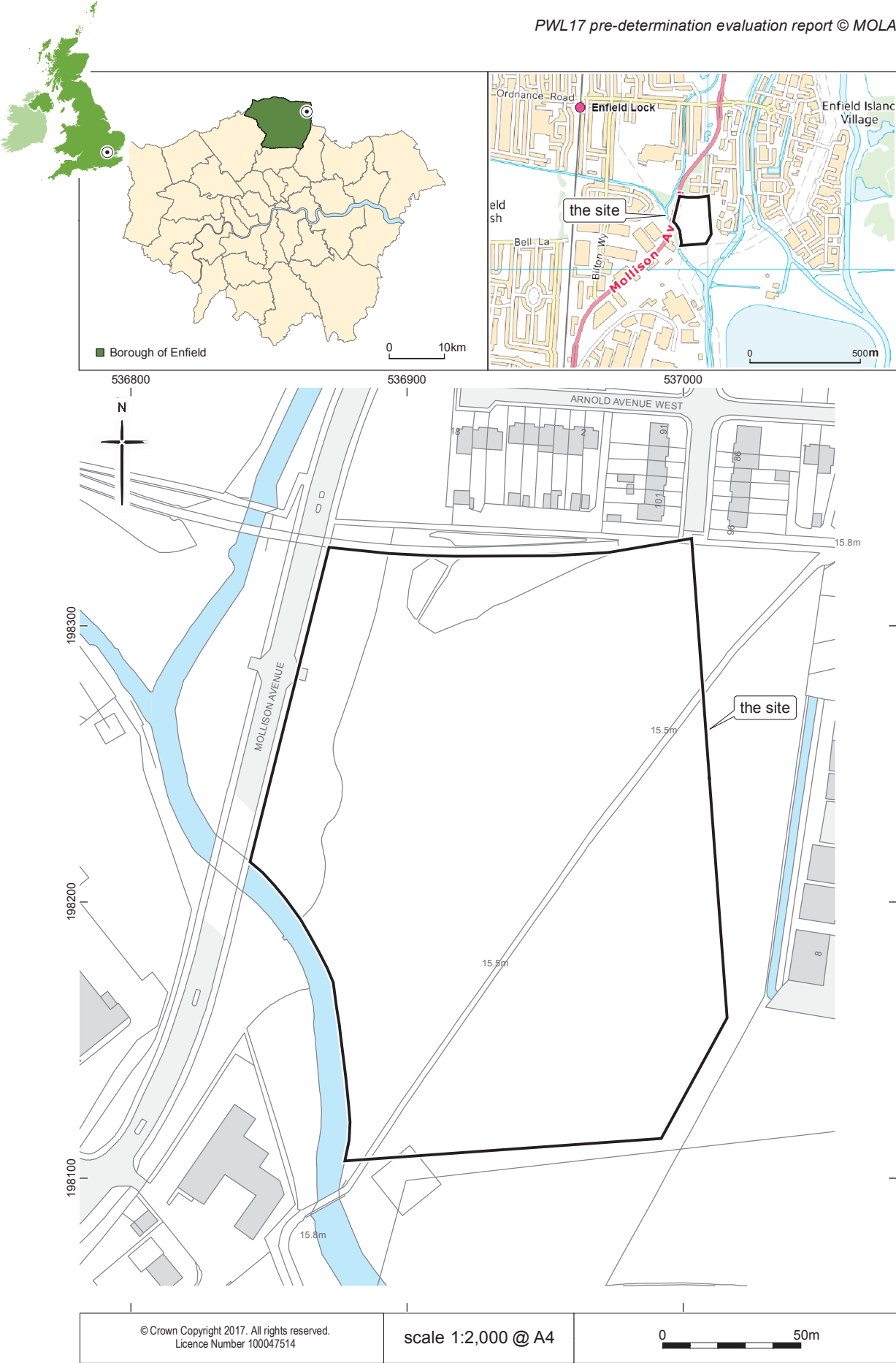


Fig 1 Site location



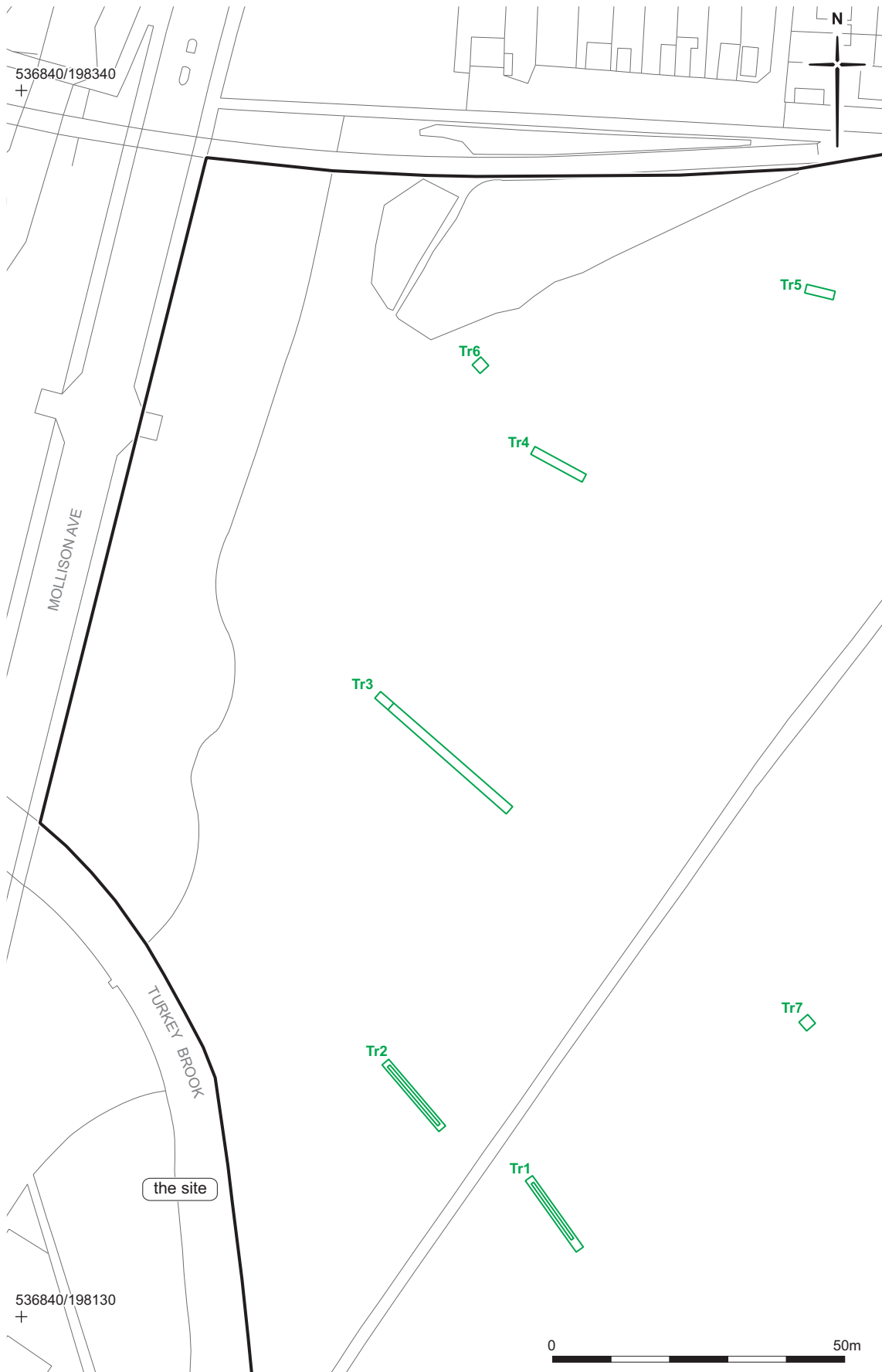


Fig 2 Areas of evaluation



Fig 3 Photograph of the south-facing section at 10m from the west end of Trench 3, looking north, with 0.5m scale



Fig 4 Photograph of Trench 7 showing wood and branch fragments in deposit [61], looking NW, with 1m scale