

Coulsdon North Industrial Estate, Coulsdon, Surrey

Archaeological Desk- Based Assessment



Oxford Archaeology North

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SUMMARY

In December 2007, Eversleigh Investment and Property Company Ltd commissioned Oxford Archaeology North (OA North) to undertake an archaeological desk-based assessment of land at Coulsdon North Industrial Estate in Coulsdon, Surrey (centred on NGR 529901 159395). The study area is located to the west of the London to Brighton railway in the centre of Coulsdon, which lies within the administrative area of the London Borough of Croydon. The study aimed to assess the potential for significant buried archaeological remains on the site, and was required to support and inform a planning application for a scheme of redevelopment. The application site does not lie within a Conservation Area, or have any other statutory designation, and there are no known archaeological remains that are considered to be of National or Regional/County importance, which would merit preservation *in-situ*.

Field systems of the Late Iron Age to Roman periods have been found within the wider 500m Study Area, representing a use of the landscape which may have extended into the Scheme Area. The presence of woodland within the southern section of the Scheme Area until the 19th century suggests a lack of more recent human exploitation within this area, whilst the northern section of the Scheme Area is likely to have been used as pasture or meadow throughout the medieval periods. However, the desk-based assessment has demonstrated that the proposed Scheme Area contains no known archaeological remains, although the potential for unidentified archaeological deposits of all periods to survive *in-situ* cannot be discounted. The location of the Scheme Area within a valley once occupied by the Coulsdon bourne is likely to have made it part of a natural route way for early populations, and its location on a thin band of gravels, would have provided lighter, well drained soils, beneficial for farming and settlement in later periods. However, the presence of made ground (probably from local chalk pits) suggests that the redevelopment of the site would not have a major impact upon any *in-situ* archaeological remains. Moreover, whilst the proposed development does necessitate some piling, these will be placed along the footprint of existing buildings, and it is not envisaged that the development will involve and substantial earth-moving works.

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Oxford Archaeology North (OA North) would like to thank Mr Tim Pope, of King Sturge LLP, for commissioning and supporting the project on behalf of Eversleigh Investment and Property Company Ltd. Thanks are also expressed to the staff at the Greater London Sites and Monuments Record, and Croydon Local Studies Centre, for their assistance with the data gathering.

The desk-based assessment and site visit was carried out by Lucy Norman, and the illustrations were produced by Markus Dylewski. The report was edited by Ian Miller, who was also responsible for project management.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 In December 2007, Oxford Archaeology North (OA North) was commissioned by Eversleigh Investment and Property Company Ltd to carry out an archaeological desk-based assessment for an area of land in Coulston, London (Fig 1), henceforth referred to as the 'Scheme Area'. The site comprises some 2.3 hectares, which is occupied presently by modern light industrial units. The proposed redevelopment of the site allows for the demolition of most of the extant structures, and the erection of new buildings. It is proposed that these will be sited largely on the footprint of the buildings that are to be demolished. Moreover, the new buildings will not have any basements, and it is not envisaged that the proposed development will necessitate any substantial earth-moving works.

1.1.2 The aim of the assessment was to:

- to provide an assessment of the archaeological potential of the Scheme Area;
- to assess the likely impacts of previous development on the survival of any archaeological remains;
- to assess the impact of the proposed development on the surviving resource;
- to present proposals for an appropriate archaeological strategy for the mitigation of any such impacts defined.

1.1.3 For the purposes of this report, a variety of archaeological sources were consulted to investigate the history of the Scheme Area, including the results of previous archaeological investigations, carried out for an area of 500m radius around the application site (the Study Area).

1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

1.2.1 The Scheme Area is located within the town of Coulston, at the northern extent of the parish of Coulston. Coulston is situated in the far south of Greater London, and is under the administration of the London Borough of Croydon. The Scheme Area is bordered by a new dual carriageway to the east, Brighton Road to the south, and Station Approach to the west and north (Figure 1).

1.2.2 The Scheme Area is situated on the northern slope of the North Downs, and lies on a thin band of recent and Pleistocene Low Terrace Gravels, within a wider landscape of chalk (BGS Sheet 286, Solid and Drift 1:50,000). It is located near the base of a valley at a height of approximately 78m OD, with the land to the north-west and south-east rising steeply to heights of 140m OD and 160m OD respectively within c 2km. Historically, the Coulston bourne

flowed through this valley, meeting another stream coming from Kingswood at Smitham Bottom, and the Caterham bourne at Purley. Today the Coulsdon bourne mainly flows beneath the ground, surfacing only during spells of wet weather (Gadsby 2000a, 11).

- 1.2.3 The Scheme Area lies on a man-made terrace of high ground. Due to its position within a valley, the made ground, and the recent construction of a new road immediately to the east, it is hard to determine precisely the original ground level. However, by studying Ordnance Survey maps and the surrounding landscape, it appears that the eastern extent of the Scheme Area may be at a level not dissimilar to its original geological level, whilst the south-western extent appears to lie on up to 8m of made ground. It is currently used as an industrial estate, and is occupied by numerous warehouses and access roads.

2. METHODOLOGY

2.1 DESK-BASED ASSESSMENT

- 2.1.1 The principal sources of information consulted were historical and modern maps, although published and unpublished secondary sources were also reviewed. The Greater London Sites and Monuments Record (GLSMR), held by English Heritage, is the main repository of archaeological data for the study area. The GLSMR was consulted and supplied printouts of known sites and events of archaeological interest within the Scheme Area and for a surrounding 500m radius. The London Borough of Croydon Local Studies Centre was also visited in order to view historic maps of the area.
- 2.1.2 The study has focused on the proposed Scheme Area, whilst information from the immediate environs has been summarised in order to place the results of the assessment into context. All known sites of archaeological and historical interest have been included in the Site Gazetteer (*Appendix 1*). Each entry has been allocated an OA number, added to the gazetteer, referred to in the text and marked on Figure 2.
- 2.1.3 In addition to the desk-based research, a rapid inspection of the Scheme Area was carried out in order to relate the past landscape and surroundings to that of the present. It also allowed for a rapid appraisal of the extant buildings and modern ground surface.
- 2.1.4 Geotechnical data of the actual Scheme Area was not available, although boreholes taken from an adjacent site was provided by the Client. However, these results were not directly relevant to the present Scheme Area, due to the boreholes being carried out in an area without the made ground.

2.2 PLANNING BACKGROUND

- 2.2.1 **Planning Policy Guidance:** Archaeology and Planning (PPG 16) sets out the Secretary of State's policy on archaeological remains. It acknowledges the potentially fragile and finite or irreplaceable nature of such remains (para 6), and states that the desirability of preservation of archaeological remains and their setting is a material consideration within the planning process (para 18). PPG 16 provides that there is a presumption in favour of the physical preservation of nationally important archaeological remains (para 8), and that where preservation *in-situ* is not justified it is reasonable for planning authorities to require the developer to make appropriate and satisfactory provision for excavation and recording of remains (para 25).
- 2.2.2 Paragraph 22 adds: '*Local planning authorities can expect developers to provide the results of such assessments ... as part of their application for sites where there is good reason to believe there are remains of archaeological importance*'.

- 2.2.3 The underlying principle of this guidance is that the cultural heritage resource represents a finite and non-renewable resource and that its conservation should be the primary goal of archaeological resource management. *‘Where the preservation of archaeological remains in situ is not appropriate, the Council will require that no development takes place on a site until archaeological investigations have been carried out by an investigating body to be nominated or approved by the Council and such investigations shall be in accordance with a detailed scheme to be approved in advance by the Council’.*
- 2.2.4 The London Plan (adopted February 2004) recognises the importance of archaeological sites whether scheduled or not (Policy 4B.14), and conforms to the guidance offered in PPG 16. Policy 4B.14 states: *‘The Mayor, in partnership with English Heritage, the Museum of London and Boroughs, will support the identification, protection, interpretation and presentation of London’s archaeological resources. Boroughs in consultation with English Heritage and other relevant statutory organisations should include appropriate policies in their UDPs for protecting Scheduled Ancient Monuments and archaeological assets within their area’.*
- 2.2.5 The London Borough of Croydon Replacement Unitary Development Plan (adopted July 2006) also recognises the importance of archaeological sites whether scheduled or not (Policy UC11), and conforms to the guidance offered in PPG 16. Policy UC11 states:

Development will only be permitted if all the following criteria are met:

- *Proposals have been properly assessed and planned for archaeological implications, where development may affect the archaeological heritage of a site. This may involve preliminary archaeological site evaluations, commissioned by the applicants from a professionally qualified archaeological practice or archaeological consultant;*
- *Early co-operation regarding the proposals between landowners, developers and archaeological practices, in accordance with the principles of the British Archaeologists and Developers Liaison Group Code of Practice, has been demonstrated;*
- *The siting and design of the new development has regard to minimising the disturbance of archaeological remains, ensuring that those most important are permanently preserved in-situ;*
- *An appropriate level of archaeological investigation, excavation, recording, analysis and publication has been agreed with the Council, secured where appropriate by the use of planning conditions or agreements;*
- *The provision of access and facilities that interpret and explain archaeological sites to the public has been considered, secured where appropriate by the use of planning conditions or agreements.*

3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 INTRODUCTION

- 3.1.1 There are no Scheduled Monuments, Registered Parks or Gardens, or Historic Battlefields within the Scheme Area, and it does not lie within a Conservation Area. Within the wider Study Area, there is one Scheduled Monument, Farthing Down, an Anglo-Saxon barrow cemetery (**OA 1**, c 480m to the south-east of the Scheme Area). The Scheme Area is surrounded by three London Borough of Croydon Areas of Archaeological Priority. These lie to the west, south and east, but the Scheme Area itself is not within such an area (Fig 2).

3.2 PREVIOUS ARCHAEOLOGICAL WORK

- 3.2.1 There has been no previous archaeological investigative work carried out within the Scheme Area. Within the wider Study Area, there have been three recorded investigations which comprise:
- **OA 4** - Excavations carried out in 1969 at the site of an Iron Age to Roman field system, situated c 250m to the east of the Scheme Area. Three parallel V-shaped ditches, running across the slope of the hill, were discovered. The lower ditch showed signs of a revetment. Late Iron Age and Romano-British pottery was found, together with several human skulls and Roman inhumations;
 - **OA 6** - Evaluation carried out on the site of the proposed A23 Coulston Relief Road, c 460m to the south-west of the Scheme Area. No significant archaeological features or finds were discovered;
 - **OA 9** - Watching brief undertaken between August 1997 and November 1998 at the north of Farthing Down, c 460m to the south-east of the Scheme Area. No archaeological features were recorded.

3.3 PREHISTORIC PERIOD (500,000 BP - 43 AD)

- 3.3.1 The Scheme Area is located within a valley created by the Coulston bourne, a waterway which leads to the Wandle at Croydon, and thence to the Thames at Wandsworth. This valley and stream would have provided a natural route across the Downs for early prehistoric migrations and exploitations. The surrounding chalkland is likely to have been covered in dense, deciduous woodland during this time (The Countryside Agency 1999, 96), making the gravel valley in which the Scheme Area lies a more accessible and attractive prospect for travelling and exploitation than its surroundings.
- 3.3.2 The earliest archaeological evidence within Coulston dates to the Palaeolithic period, with hand axes found both in Coulston and nearby in Chaldon (Gadsby 2000a, 11). In addition, in 1897 a pre-glacial hippopotamus, now in the Horniman Museum, was discovered at the site of the Cane Hills hospital

(Weinreb *et al* 1983, 205). However, there is no recorded archaeological remains of the Palaeolithic or Mesolithic periods from within the Scheme Area or wider Study Area.

- 3.3.3 During the Neolithic period, deliberate modifications of the landscape were undertaken to clear land for agricultural exploitation (Short 2006, 39), although archaeological evidence within Surrey suggests activity was still mainly within river valleys and on lighter, well drained soils over gravels. This would suggest a good potential for archaeological evidence of these periods, but there is no evidence for Neolithic activity within the Scheme Area or wider Study Area. The only Bronze Age evidence within the vicinity is located c 1.5km to the south-east of the Scheme Area, where a hoard was discovered at what appeared to be the site of a metal-worker's workshop (Gadsby 2000a, 13).
- 3.3.4 One of the main developments of the later Bronze Age and Iron Age was the proliferation of field systems along both the Thames valley, and within the valleys of its tributary streams (Cotton 2004, 27). An Iron Age to Roman field system has been identified (OA 4, c 250m to the east of the Scheme Area) within the Study Area. In addition, isolated discoveries of undated later prehistoric pottery and lithics have been made c 200m to the north-east of the Scheme Area (OA 3), and a late prehistoric mine has been recorded at Deepfield Way (OA 7, c 220m to the east of the Scheme Area). The mine was likely to have been for flint mining in the chalk landscape, which suggests there will not be similar mines within the Scheme Area due its gravel geology.

3.4 ROMANO-BRITISH PERIOD (AD 43-410)

- 3.4.1 The pattern of Iron Age settlement and land use continues into the Roman period, with an apparent intensification of agriculture in river valley locations on river gravels, such as at Coulston. The field systems identified in the 1960s (OA 4, c 250m to the east of the Scheme Area) are likely to have continued in use into the Roman period. The possibility that these field systems continued into the Scheme Area cannot be discounted.
- 3.4.2 There are no recorded archaeological artefacts or features from the Roman period within the Scheme Area. A Roman cemetery, which contained 11 burials, has been excavated at Coulston Woods (OA 5, c 250m to the east of the Scheme Area), and a Roman quarry has been recorded at Marlpit Lane (OA 8, c 320m to the south east of the Scheme Area). Despite these archaeological discoveries, there is no evidence for a significant Roman settlement at Coulston; the nearest Roman settlement to the Scheme Area appears to have been at Croydon (c 4km to the north), where a small nucleated settlement grew alongside the London to Brighton Roman road (Margary road 150, 1967, 62). However, the presence of the field systems and the cemetery does suggest the likelihood of a small settlement somewhere in the vicinity.

3.5 THE MEDIEVAL PERIOD (AD 410-1550)

- 3.5.1 *The Early Medieval Period (AD410-1066):* Farthing Down (OA 1) Site), a striking example of an Anglo-Saxon barrow cemetery, lies c 480m to the south-east of the Scheme Area. The cemetery follows an approximate north-south orientation, with two groupings of burials. Investigations within the site have dated it as probably 7th century. Another Anglo-Saxon cemetery has been recorded at Cane Hill (c 800m to the south west of the Scheme Area). It has been suggested that the position of these cemeteries marks a lost lathe boundary (an administrative county sub-division, from the Anglo-Saxon period until the early 20th century), destroyed by the creation of the Croydon estate in the 9th century AD (Blair 1991, 18). These cemeteries lie on higher ground, in areas chosen for their visibility, and there is therefore little potential for additional barrows to be present within the valley in which the Scheme Area is located.
- 3.5.2 Despite these important remnants of the period, little additional archaeological evidence from the early medieval period is known in Coulsdon, and there are no further recorded examples from within the Scheme Area or the wider Study Area.
- 3.5.3 *The Later Medieval Period (AD1066-1550):* Domesday (1086) records that the main settlement at Coulsdon was located at *Colesdone*, present day Old Coulsdon (c 2.5km to the south east of the Scheme Area). The Manor in which the Scheme Area was located was a wealthy one, held by Chertsey Abbey. It possessed 10 villeina, four cottars with six ploughs and a church. The church, St John's, was rebuilt in 1276 (Gadsby 2000b, 19). The manor grew throughout the 12th and 13th centuries, and several 'sub manors' were leased out, such as at Taunton (1191), Hooley (1202) and Garston (c 1230). In 1536, during the Dissolution, the Abbey of Chertsey was disbanded and the manor of Coulsdon granted to the Carew family (*op cit*, 24).
- 3.5.4 There are no recorded archaeological features or artefacts of the later medieval period from within the Scheme Area or the wider Study Area. During this period, the Scheme Area was located c 2.5km to the north-west of the urban environment of *Colesdone*. The earliest detailed maps of the area (Rocque, 1726, Fig 4), show the site to have either been in woodland, under a road or under pasture/arable, and it is likely that this was the case throughout the earlier medieval periods.

3.6 POST-MEDIEVAL PERIOD (AD1550+)

- 3.6.1 The earliest available map to show Coulsdon is Nicolson's *Map of Surrey*, which was produced in 1594 (Fig 3). Although this shows no detail, it demonstrates that Coulsdon was of significant size to be mentioned alongside settlements such as Chipstead and Warlingham.
- 3.6.2 Rocque's *Map of Surrey*, which was produced in 1762, is the earliest detailed map of the Scheme Area. It shows the western part of the Scheme Area to lie within a road, which is part of a cross road junction within a wider countryside landscape of scattered farms, fields and woodland.

- 3.6.3 The 1785 map of the Manor of Thomas Byron by Tho' Bainbridge (Fig 5) is the earliest available map to include field names. It shows the north of the Scheme Area to lie within farmland belonging to Mr Saunders, the south within a small patch of woodland called Pipers, and the west within a wide road or thoroughfare which at its northern extent joined Leydown or Leaden Crofts (later known as Lion Green), the site of the first cricket match to be played with the additional third stump and second bail in 1731 (Broadbent and Latham 1976, 43). The width of this road suggests the possibility it was a green road, or drove way through the valley, and could be medieval or earlier.
- 3.6.4 There is no Enclosure Map of Coulston, which suggests the land was already enclosed by the 18th century. The process of clearing the woodland and enclosing land is likely to have begun in the Neolithic period, with most of the dated clearances belonging to the Middle and Late Bronze Ages (Short 2006, 39), although many of the downland ridges are still well wooded (*op cit*, 49). During the medieval and post-medieval periods the valleys of the North Downs appear to have retained area of woodland, as well as having been used for settlement and agriculture (Blair 1991, 45-6).
- 3.6.5 There is no Tithe Map for the Parish of Coulston and Purley, as the 1st Edition Ordnance Survey map of the area had already been published by the time the area was due to be recorded. As such, a Tithe Apportionment was produced to accompany the 1st Edition Ordnance Survey map of 1866 instead. The Map and Apportionment shows the southern half of the Scheme Area to still be woodland, now called 'Pipers Bushes', whilst the northern field has become the property of Lord Byron, who utilised it as a meadow.
- 3.6.6 Within the south of the Scheme Area there is part of a raised area labelled as 'Spoil Bank', which is likely to be the waste from the chalk pit shown to the east. At this time, this made ground does not venture far into the area occupied by the Scheme Area, and an identical scene is shown on the 2nd Edition 25" Ordnance Survey map of 1897 (Fig 6). However, by the 3rd Edition 25" Ordnance Survey map of 1913 (Fig 7), the Scheme Area has changed dramatically, with the whole area having been built up and levelled (probably to the level at which it is today), apparently for use by the railway. A network of railway sidings are shown to have crossed the area. The 1914 6" Ordnance Survey map shows the chalk pit to the east to have grown considerably, and it is possible the made ground within the Scheme Area was constructed with the spoil from these quarries.
- 3.6.7 The geography of the Scheme Area does not appear to have changed since the early 20th century, although the land use has altered. The Scheme Area remained in railway use, with associated buildings, until the 1977 1:1,250 Ordnance Survey map, which shows it to have become the industrial estate present today.

3.7 RESULTS OF WALKOVER SURVEY

- 3.7.1 No new archaeological sites were recorded during the walkover survey. The whole Scheme Area is covered in tarmac or hardstanding, with the exception of the surrounding banks which were overgrown with trees and brambles.
- 3.7.2 The Scheme Area is situated on a man-made terrace of high ground, as depicted on Ordnance Survey maps since 1913. Due to its position within a valley, the made ground and the recent construction of a new road immediately to the east, it is hard to determine the original ground level. However, by studying Ordnance Survey maps and the surrounding landscape, it appears that the eastern extent of the Scheme Area may be at a level not dissimilar to its original geological level, whilst the south western extent appears to lie on up to 8m of made ground. The Scheme Area appears to have been built up in order to create a flat platform for the construction of a whole series of railway lines.
- 3.7.3 Two of the warehouses at the eastern part of the Scheme Area had loading bays which truncated into the ground. This may have caused impacts on any *in-situ* archaeological remains within the footprint of these loading bays, given the relative lack of made ground in these areas.

4. SIGNIFICANCE OF THE REMAINS

4.1 PREVIOUS IMPACTS AND SURVIVAL

- 4.1.1 Since the construction of the present ground level at the turn of the 20th century, the Scheme Area has been used as a railway depot, prior to its reuse as an industrial estate. The construction of the railway sidings and associated buildings are unlikely to have disturbed any buried archaeological remains, due to the thickness of made ground on which they were located and the minimal likely below ground disturbance from these structures. This predicted lack of impact also stems from the fact that these structures were all located with the centre of the Scheme Area, and to the west, in the area where the made ground is deepest.
- 4.1.2 The presence of the large area of made ground within the Scheme Area suggests that late 20th-century industrial buildings will also have caused little disturbance to any archaeological deposits within the western areas of the Scheme Area. Archaeological survival at the eastern edge of the Scheme Area may be less good, given that the made ground is less substantial in this area, in particular in the area of the two loading bays seen during the walkover.

4.2 THE ARCHAEOLOGICAL POTENTIAL

- 4.2.1 This desk-based assessment has identified no known significant archaeological features within the Scheme Area, although it has the potential to contain unidentified archaeological features. The location of the Scheme Area within a valley occupied by the Coulston bourne would have made it part of a natural route for early populations, and its location on a thin band of gravels, would have provided lighter, well drained soils, beneficial for farming and settlement in later periods. Despite these benefits, there is no recorded evidence for any archaeological artefacts or features within the Scheme Area or the wider Study Area from the early prehistoric period. There is therefore an uncertain but low potential for significant archaeological remains of the early prehistoric period to be present within the Scheme Area.
- 4.2.2 There is evidence of Iron Age to Roman field systems within the wider Study Area, as well as a Roman cemetery and a number of Roman findspots, although there is no evidence for a significant settlement in this area. There is therefore an uncertain but moderate potential for archaeological deposits of the Iron Age and Roman periods being present within the Scheme Area.
- 4.2.3 There is very little evidence for the medieval and post-medieval periods in the Scheme Area and the wider Study Area. It seems that the Scheme Area lay within both meadow/arable and woodland with its western part, possibly extending into a medieval drove or green road during this time. This may increase the potential for archaeological remains being present, perhaps including the early remains of the road and squatter dwellings, etc. There is no evidence for any structures within the Scheme Area prior to the turn of the century, although the western extent of the Scheme Area was within a

thoroughfare or drove way. There is therefore an uncertain but moderate potential for archaeological remains of the medieval and post-medieval periods within the Scheme Area, relating to its rural aspect.

- 4.2.4 Due to the position of the Scheme Area on a slope near the bottom of a valley, there is the potential for colluvium to be present across the area. The presence of colluvial, depending on its date, may have covered, and therefore be protecting, earlier archaeological deposits.

4.3 SIGNIFICANCE

- 4.3.1 Table 1 shows the sensitivity of archaeological sites scaled in accordance with its relative importance using the following terms for the cultural heritage and archaeology issues, with guideline recommendations for a mitigation strategy.

Importance	Examples of Site Type	Mitigation
National	Scheduled Monuments (SMs), Grade I and II* Listed Buildings	To be avoided
Regional/County	Conservation Areas, Registered Parks and Gardens (Statutory Designated Sites), Grade II Listed Buildings	Avoidance recommended
Local/Borough	Sites with a local or borough value or interest for cultural appreciation Sites that are so badly damaged that too little remains to justify inclusion into a higher grade	Avoidance not envisaged
Low Local	Sites with a low local value or interest for cultural appreciation Sites that are so badly damaged that too little remains to justify inclusion into a higher grade	Avoidance not envisaged
Negligible	Sites or features with no significant value or interest	Avoidance unnecessary

Table 1: Criteria used to determine Importance of Sites

- 4.3.2 No known archaeological sites of interest exist within the Scheme Area, although ten sites have been identified within the wider Study Area. These include a Scheduled Monument (Site **OA 01**), which is considered to be of National Significance, and a Grade II Listed Building (Site **OA 02**). All of the other sites within the Study Area are considered to be of either Regional/County or Local/Borough Significance.

5. LIKELY IMPACT OF DEVELOPMENT

5.1 IMPACT

5.1.1 In its Planning Policy Guidance *Note 16*, the Department of the Environment (DoE) advises that archaeological remains are a continually diminishing resource and *‘should be seen as finite, and non-renewable resource, in many cases, highly fragile and vulnerable to destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed’*. It has been the intention of this study to identify the archaeological potential of the Scheme Area, and assess the impact of redevelopment, thus allowing the advice of the DoE to be enacted upon. Assessment of impact has been achieved by the following method:

- assessing any potential impact and the significance of the effects arising from redevelopment;
- reviewing the evidence for past impacts that may have affected the archaeological sites;
- outlining suitable mitigation measures, where possible at this stage, to avoid, reduce or remedy adverse archaeological impacts.

5.1.2 The impact is assessed in terms of the sensitivity or importance of the site to the magnitude of change or potential scale of impact during future redevelopment scheme. The magnitude, or scale of an impact is often difficult to define, but will be termed as substantial, moderate slight, or negligible, as shown in Table 2.

Scale of Impact	Description
Substantial	Significant change in environmental factors; Complete destruction of the site or feature; Change to the site or feature resulting in a fundamental change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.
Moderate	Significant change in environmental factors; Change to the site or feature resulting in an appreciable change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.
Slight	Change to the site or feature resulting in a small change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.
Negligible	Negligible change or no material changes to the site or feature. No real change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.

Table 2: Criteria used to determine Scale of Impact

- 5.1.3 The interaction of the scale of impact (Table 2) and the perceived importance of the archaeological site (Table 1) produce the impact significance. This may be calculated by using the matrix shown in Table 3:

Resource Value (Importance)	Scale of Impact Upon Archaeological Site			
	Substantial	Moderate	Slight	Negligible
National	Major	Major	Intermediate/ Minor	Neutral
Regional/County	Major	Major/ Intermediate	Minor	Neutral
Local/Borough	Intermediate	Intermediate	Minor	Neutral
Low Local	Intermediate / Minor	Minor	Minor/ Neutral	Neutral
Negligible	Neutral	Neutral	Neutral	Neutral

Table 3: Impact Significance Matrix

- 5.1.4 The presence of up to 8m of made ground within the western extent of the Scheme Area suggests that any proposed development is unlikely to reach any archaeological horizons here, unless piling or deep excavations are planned. This reduces the potential for significant archaeological remains to be affected during the development of this area.
- 5.1.5 There is a greater potential for impacts on any archaeological remains in the eastern section of the Scheme Area, where there is less made ground. However, this area may also have suffered more from previous damage to any archaeological remains present, from previous construction.

5.2 IMPACT ASSESSMENT

- 5.2.1 Given that all of the identified archaeological sites of interest lie within the wider Study Area, but beyond the boundary of the actual Scheme Area, the impact of the proposed development on these sites is considered to be negligible, and the significance of impact as neutral.

6. RECOMMENDATIONS FOR ARCHAEOLOGICAL MITIGATION

6.1 INTRODUCTION

- 6.1.1 Current legislation draws a distinction between archaeological remains of national importance and other remains considered to be of lesser significance. Those perceived to be of national importance may require preservation *in-situ*, whilst those of lesser significance may undergo preservation by record, where high local or regional significance can be demonstrated. No sites have been identified within the Scheme Area that may be considered as being of national importance and therefore merit preservation *in-situ*. However, the possibility that some unknown archaeological remains survive *in-situ* beneath the 19th/20th century made ground cannot be discounted. It seems likely that any such remains would relate largely to farming and rural land use.

6.2 ARCHAEOLOGICAL MONITORING

- 6.2.1 To further inform the archaeological potential, extent of made ground deposits, and likely nature of impacts from the proposed development, further work may be required. The scale and nature of any further archaeological investigation would need to be agreed with the relevant case officer at the London Borough of Croydon, but is likely to begin with a detailed study of any geo-technical data obtained from the Scheme Area to establish the presence and depth of any archaeological horizons across the site. Once the depth of the archaeological horizon is established, it will be possible to determine firmly whether proposed development plans will extend into it, and if it is concluded that impacts will be made upon the archaeological horizon then a programme of archaeological mitigation may be required. Given the results obtained from the desk-based assessment, an archaeological watching brief may form an appropriate mitigation strategy.

7. CONCLUSION

7.1 CONCLUSION

- 7.1.1 This desk-based assessment has demonstrated that the Study Area is located within an area with good potential for *in-situ* archaeological deposits of all periods, although the actual Scheme Area contains no recorded archaeological remains. The location of the Scheme Area within a valley once occupied by the Coulston bourne would have made it part of a natural route way for early populations. Within the wider Study Area, field systems of the Late Iron Age to Roman period have been found, a use of the landscape which may continue into the Scheme Area, due to the light ground soils present. The presence of woodland within the southern section of the Scheme Area until the 19th century suggests a lack of human activity within this area, whilst the northern section of the Scheme Area is likely to have been used as pasture or arable. The presence of a possible green or drove road through the south western part of the site may increase the possibility of medieval archaeological deposits on the Scheme Area.
- 7.1.2 Any buried archaeological deposits within the western section of the Scheme Area will be protected by the made ground, dating to between 1897 and 1913, and are unlikely sustain any major impact from the proposed development. Within the eastern extent of the Scheme Area, where there is less made ground, there is a greater potential for impacts to be made during any construction work upon archaeological deposits. Further evaluation work, initially in the form of a borehole survey may clarify the depths of made ground across the Scheme Area, and whether the proposed development will exceed these depths.

8. BIBLIOGRAPHY

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APPENDIX 1: GAZETTEER OF SITES

OA Ref. No	Feature Type	Description	Source
01	Scheduled Monument	Farthing Down Anglo Saxon round barrow cemetery of probable 7th century date.	LO88
02	Building	Coulsdon Methodist Church, Grade II Listed Building. Built 1911.	SMR MLO82378
03	Findspots	Late prehistoric pot and lithic implement found at Coulsdon Inner Relief Road	SMR MLO64539, MLO64538
04	Archaeological Investigation	Iron Age to Roman field system identified. Possible ditched enclosure was discovered during quarrying in Coulsdon Woods. Originally observed in the face of Stoats Nest Quarry in 1805, the site was investigated in 1969 when three parallel V shaped ditches were observed running across the slope of the hill. The lower ditch showed signs of a revetment. Late Iron Age and Romano-British pottery was found and the assemblage was paralleled by finds from Woodplace Farm, Netherene. Several skulls were found on the site and later Roman (fourth century) inhumations have also been recorded.	SMR MLO24741
05	Cemetery	Coulsdon Woods Roman cemetery, A small group of eleven burials was found at Coulsdon Wood. All were orientated east-west and from nails and fragments of wood found in the graves they appear to have been in coffins. One burial contained a bronze AE4 of Constantius II (c346) and the nails have been dated to later half of the 4th century. A number of skulls were also found on the site.	SMR MLO38395
06	Archaeological Investigation	Evaluation carried out by MoLAS on the site of the proposed A23 Coulsdon Relief Road, London Borough of Croydon. Periglacial and post-glacial deposits were found in six of the trenches no significant archaeological features or finds were discovered. This was probably due to their positioning down slope and towards the bottom of the valley. There was no evidence for the Croydon, Mersham & Godstone Iron Railways of 1803 that ran along the north-east side of Cane Hill. The natural chalk was observed in trench 1 (93.12 to 94.66m OD) and truncated in trench 7.	SMR MLO76206

OA Ref. No	Feature Type	Description	Source
07	Mine	Deepfield Way (general area), late prehistoric flint mine. There are reports of a number of flint mines from Coulsdon eg: in 'messrs halls lime pit at Coulsdon' where marks of axes were visible on the side of the shaft, at the bottom was a heap of discarded animal bones.	SMR MLO14406
08	Quarry	Marlpit Lane Quarry, Roman pit measuring 10 ft wide and 15 ft deep recorded in at chalk quarry at Coulsdon, in 1923. The sides of the pit were possibly stepped and showed pick marks. Roman pottery and animal bones were recovered.	SMR MLO8967
09	Archaeological Investigation	Watching brief undertaken by MoLAS in August 1997 - November 1998; at the north of Farthing Down. No archaeological features were recorded, although colluvial deposits were observed in testpits excavated on kerbing on the N approach road.	SMR MLO73375
10	Findspot	Undated inhumation found at Lion Green Rd Car Park. Skeletons possibly with grave goods. May be part of the 'cane hill' cemetery (020337).	SMR MLO13309

OA = Oxford Archaeology

SMR = Greater London Sites & Monuments Record

HS = Historic Sources

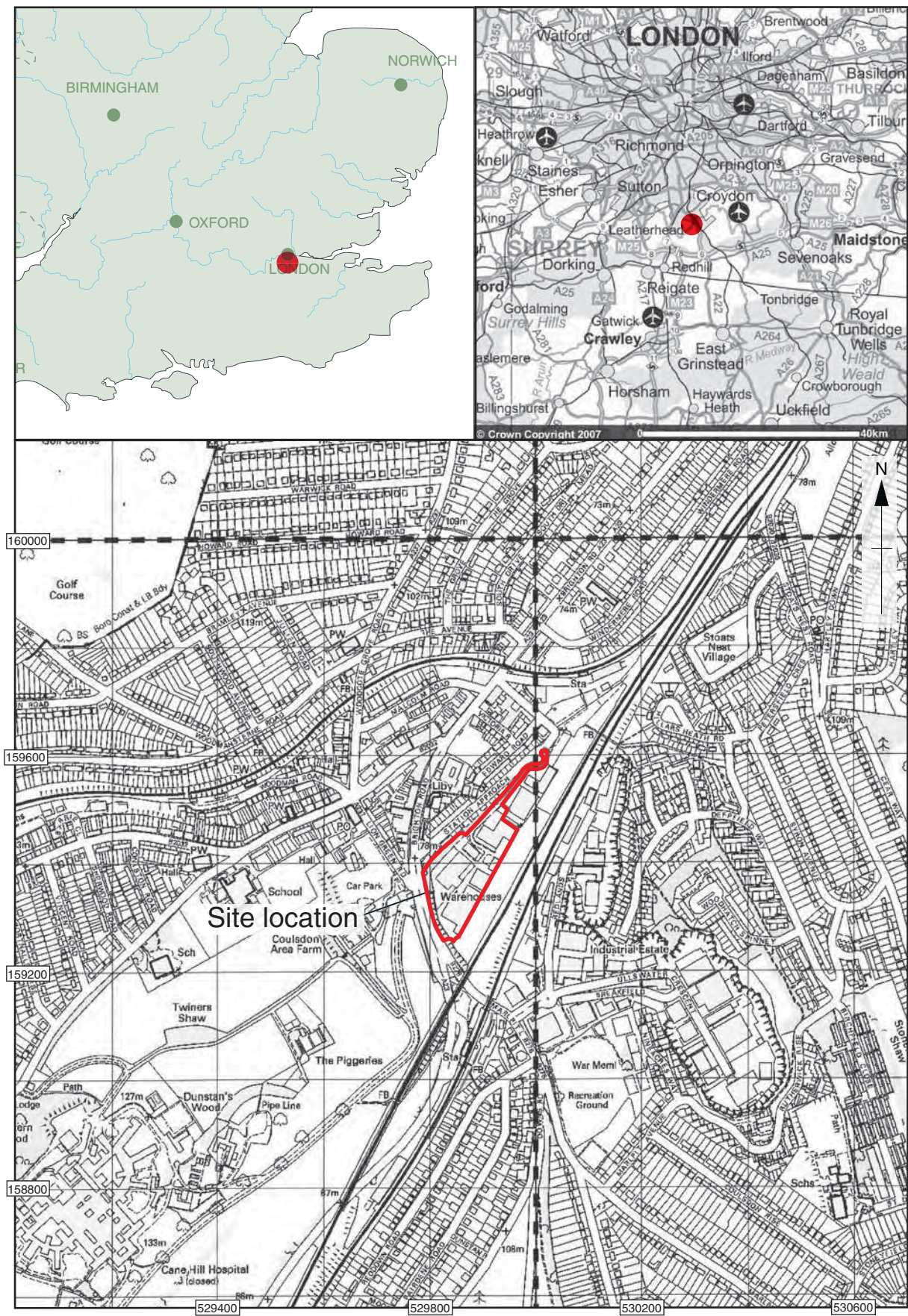
WS = Walkover Survey

AP = Aerial Photographs

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Figure 1: Site location



Figure 3: Nicolson's Map of Surrey 1594

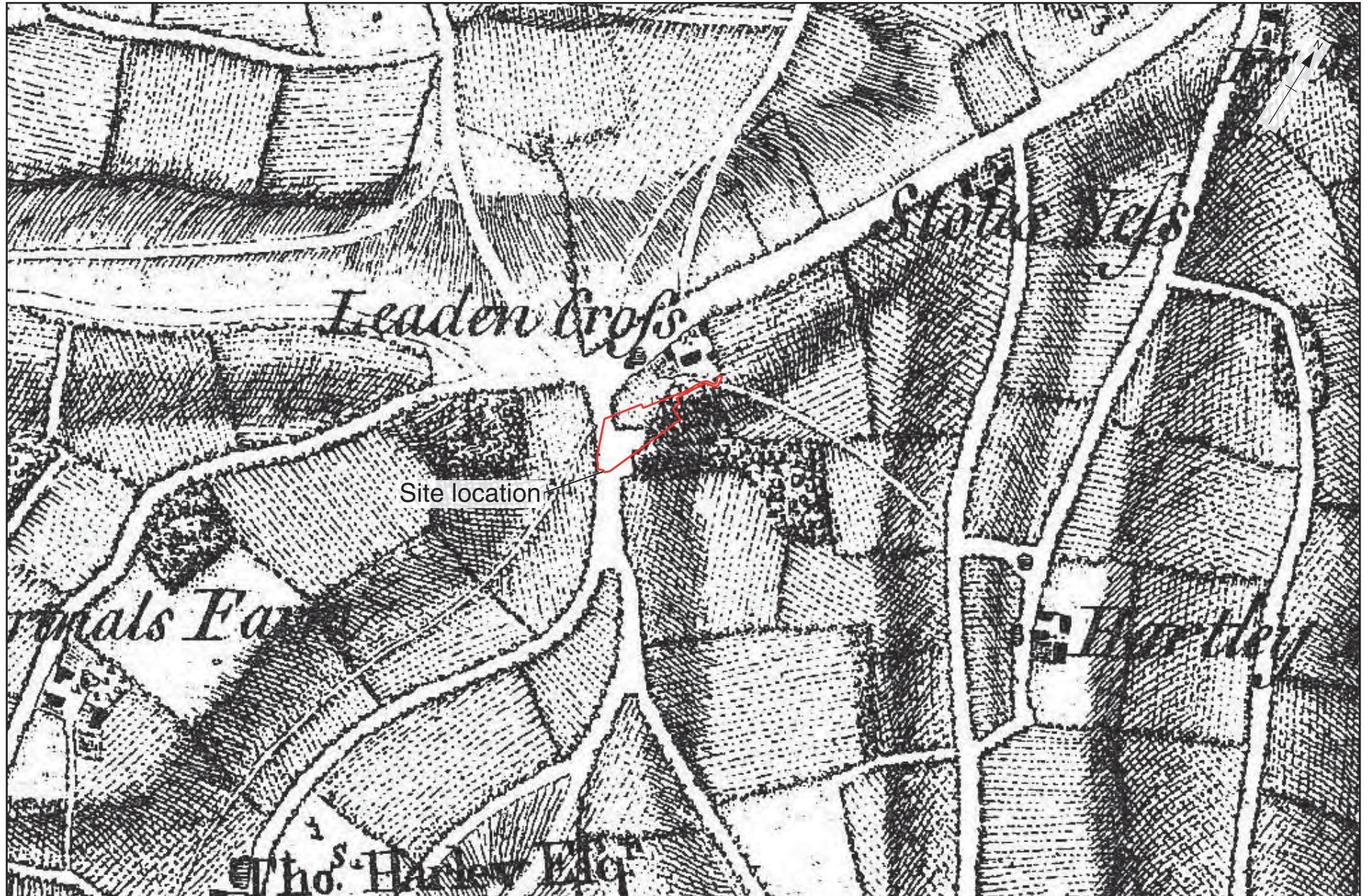


Figure 4: Rocque's Map of Surrey 1762



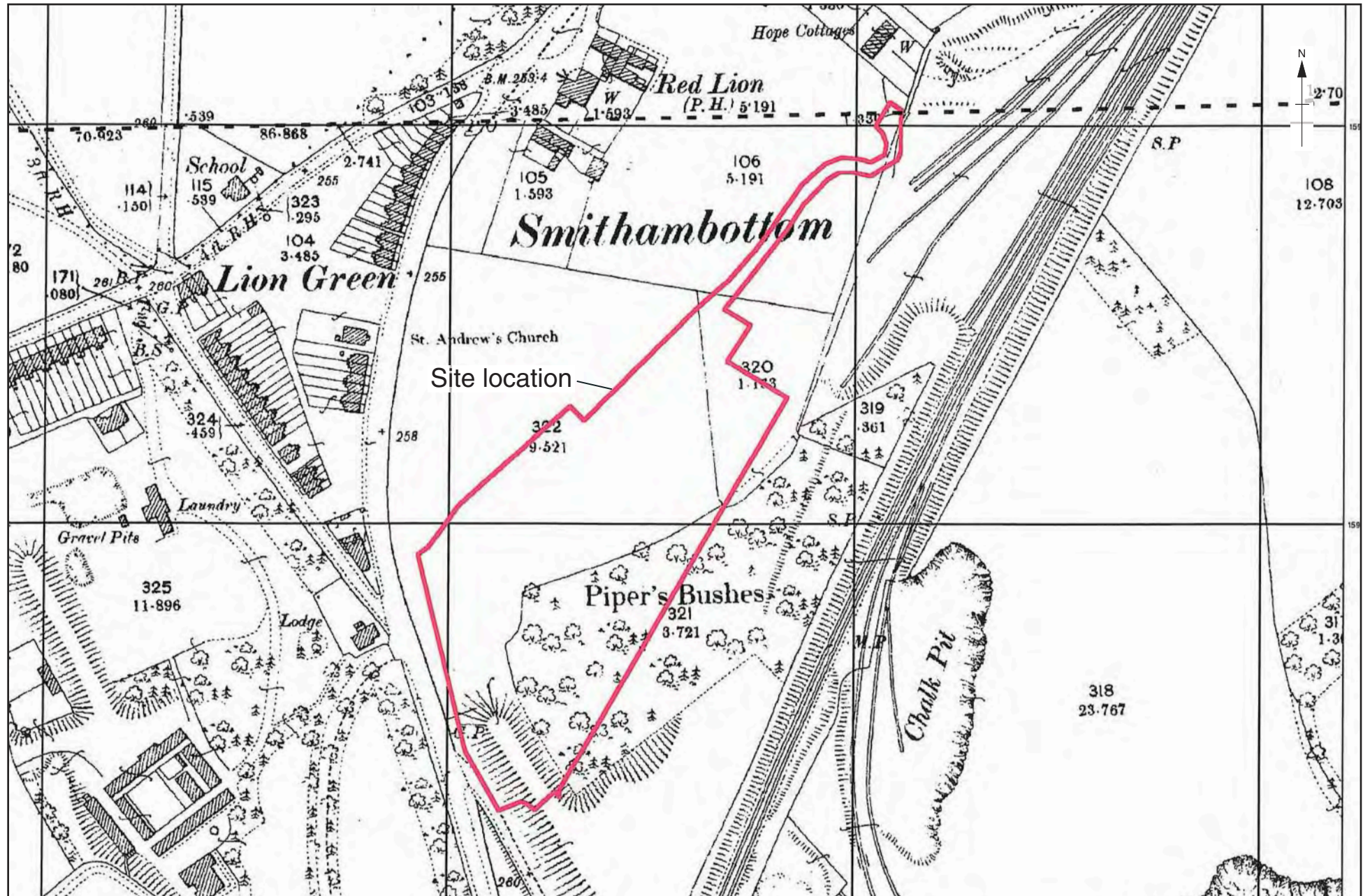


Figure 6: 2nd Edition 25'' OS Map 1897

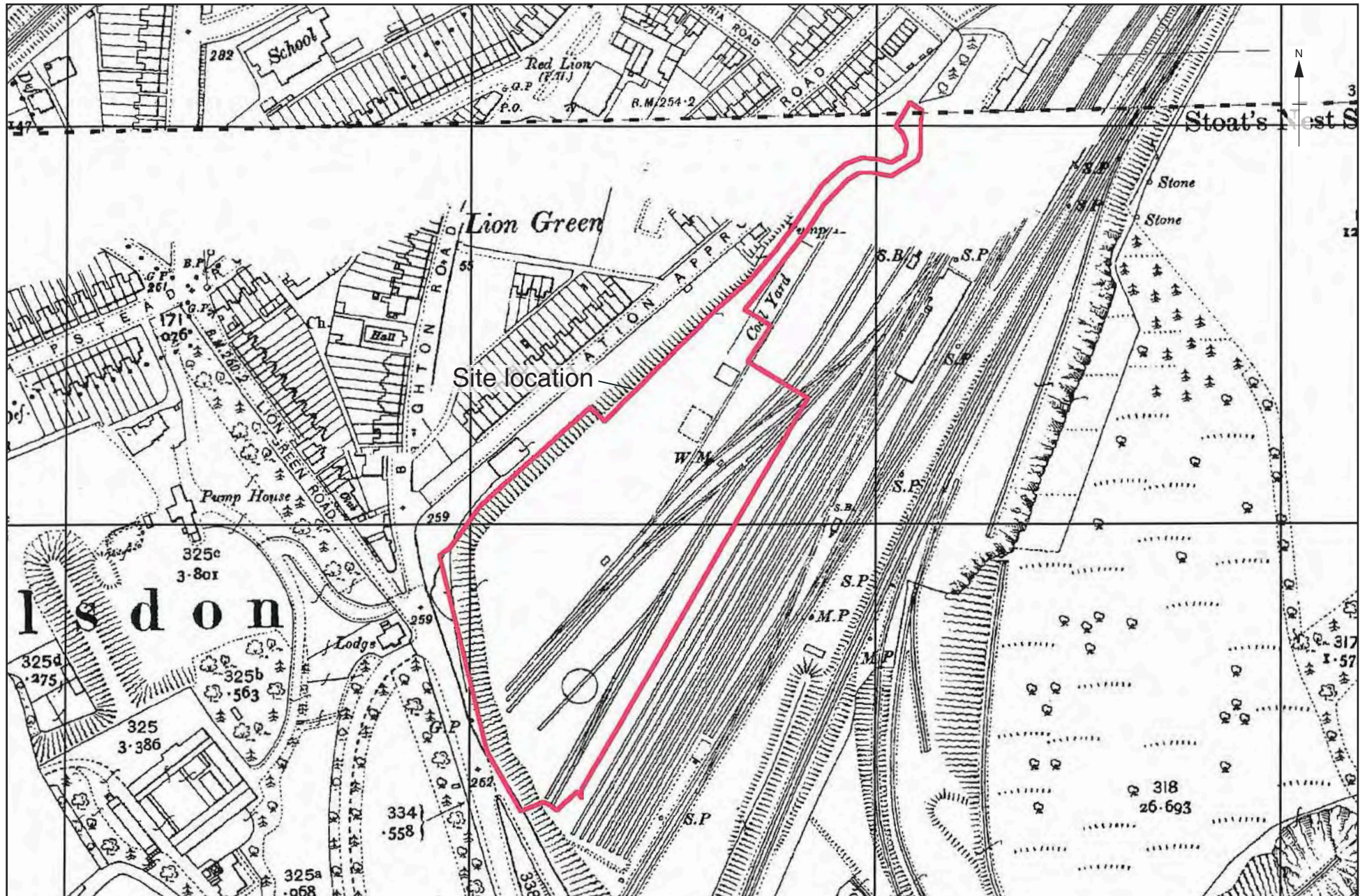


Figure 7: 3rd Edition 25" OS Map 1913